



---

# **322C 322C L** **Track-Type Excavators**

---

**Powered by 3126 Engine**

**SERIAL NUMBER**

**ADX1-Up(Vehicle)**

**BTE1-Up(Vehicle)**

**HBG1-Up(Vehicle)**

**KCF1-Up(Vehicle)**

**5GG00218-Up(Engine)**

## HOW TO USE THE PARTS MANUAL

Caterpillar Parts Manuals include illustrations of the groups or assemblies which make up the machine. These illustrations show the standard components plus many of the attachments available for the machine.

The alphabetical index located in the front part of the book should be used to determine the page number on which specific illustrations are shown. Reference to those pages will identify each of the individual serviceable parts.

### Captions

The caption under each illustration identifies the part number and name of the group or assembly shown. If more than one illustration is included for any group, the caption identifies the specific machine serial numbers to which each illustration applies. In some cases it is not possible to determine the specific machine serial numbers to which different illustrations are applicable. In those cases the caption identifies the illustration as "First Type", "Second Type", etc. Reference to the actual group or assembly is necessary in those cases to determine which illustration should be used.

Captions provide additional information such as page numbers where illustrations of sub assemblies are shown, information regarding quantities used and other information intended to assist the user in determining parts needs.

This information indicates the effective serial number or effective date on which changes became effective.

Example :

D95.05- : Applicable on and after May 1995

↑  
—— D indicates the nineteen hundreds.

T00.05- : Applicable on and after May 2000

↑  
—— T indicates the two thousands.

## Indented Part Names

Within each illustration is a parts list identifying each serviceable part in the illustration. When a part name is indented in this list, it means that serviceable item is a part of the serviceable item under which it is indented.

### Abbreviations and Symbols

R.H. Right Hand } Refers to the side of  
L.H. Left Hand } the machine as viewed  
} from the operator's  
} compartment.

L Length  
T Thickness  
Z Number of Gear Teeth  
O.D. Outside Diameter  
I.D. Inside Diameter  
O.S. Over Size  
U.S. Under Size  
N/S Not Serviced  
AS Assembly  
NOM Nominal

#### Abbreviations of Wire Colors

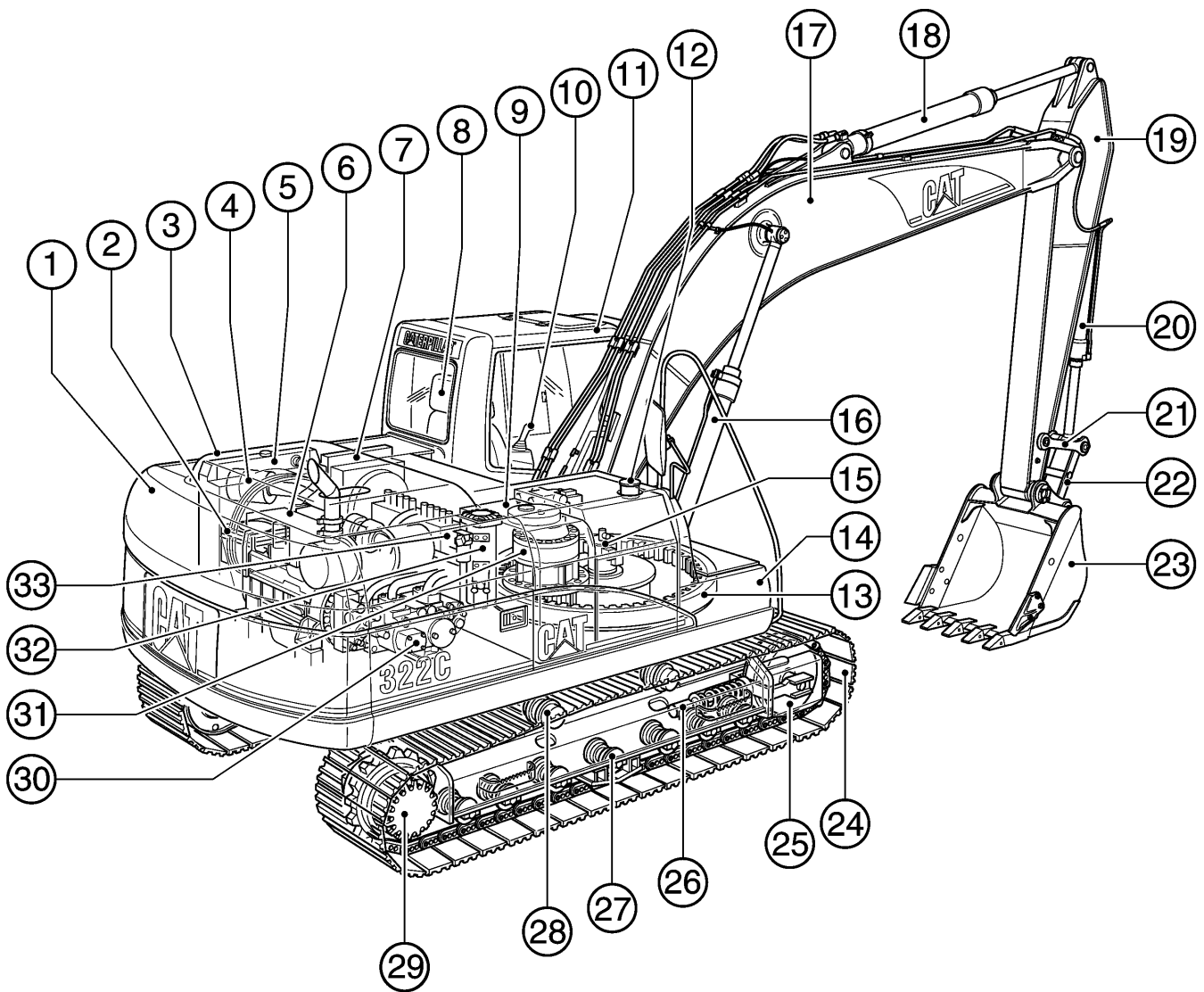
|            |                    |
|------------|--------------------|
| RD :Red    | BR :Brown          |
| WH :White  | GN :Green          |
| OR :Orange | BU :Blue           |
| YL :Yellow | T :Tan             |
| PK :Pink   | DK/BU :Dark Blue   |
| BK :Black  | DK/GN :Dark Green  |
| GY :Gray   | LT/BU :Light Blue  |
| PU :Purple | LT/GN :Light Green |

### Note

Continuing improvement and advancement of product design may cause changes to your machine which may not be included in this publication. Each publication is reviewed and revised, as required, to update and include these changes in later editions.

Whenever a question arises regarding your Caterpillar product, or this publication, please consult your Caterpillar dealer for the latest available information.

# MODEL VIEW



|                               | PAGE |                         | PAGE |                        | PAGE |
|-------------------------------|------|-------------------------|------|------------------------|------|
| ① Counterweight .....         | 282  | ⑫ Fuel Tank .....       | 119  | ⑳ Bucket .....         | 738  |
| ② Battery .....               | 122  | ⑬ Swing Bearing .....   | 288  | ㉑ Track .....          | 327  |
| ③ Engine Hood .....           | 258  | ⑭ Storage Box .....     | 277  | ㉒ Idler .....          | 307  |
| ④ Air Cleaner .....           | 89   | ⑮ Swivel .....          | 487  | ㉓ Track Adjuster ..... | 311  |
| ⑤ Radiator & Aftercooler .... | 72   | ⑯ Boom Cylinder .....   | 368  | ㉔ Track Roller .....   | 318  |
| ⑥ Engine .....                | 11   | ⑰ Boom .....            | 708  | ㉕ Carrier Roller ..... | 318  |
| ⑦ Oil Cooler .....            | 77   | ⑱ Stick Cylinder .....  | 370  | ㉖ Final Drive .....    | 253  |
| ⑧ Operator Seat .....         | 659  | ⑲ Stick .....           | 714  | ㉗ Pump .....           | 343  |
| ⑨ Hydraulic Tank .....        | 332  | ㉑ Bucket Cylinder ..... | 372  | ㉘ Swing Drive .....    | 473  |
| ⑩ Control Lever .....         | 489  | ㉒ Link .....            | 726  | ㉙ Capsule Filter ..... | 358  |
| ⑪ Cab .....                   | 578  | ㉓ Rod .....             | 726  | ㉚ Control Valve .....  | 506  |

# REPLACEMENT ITEMS

The following chart provides a convenient listing of those items which require occasional replacement during normal operation or maintenance.

| DESCRIPTION                  | PART NO. | QTY.<br>USED | PAGE<br>NO. |
|------------------------------|----------|--------------|-------------|
| Belt                         |          |              |             |
| Alternator & Air Conditioner | 183-4494 | 1            | 53          |
| Filter                       |          |              |             |
| Water Separator Element      | 1R-0770  | 1            | 117         |
| Air Conditioner Filter       | 185-8154 | 1            | 674         |
| Air Filter                   |          |              |             |
| Secondary Filter Assembly    | 6I-2504  | 1            | 90          |
| Primary Filter Assembly      | 6I-2503  | 1            | 90          |
| Engine Oil Filter            | 1R-0739  | 1            | 65          |
| Cab Air Filter               | 4I-1278  | 1            | 681         |
| Hydraulic Oil Drain Filter   | 093-7521 | 1            | 356         |
| Hydraulic Oil Pilot Filter   | 5I-8670  | 1            | 357         |
| Hydraulic Tank Return Filter | 126-2081 | 1            | 360         |
| Fuel Filter                  | 1R-0762  | 1            | 114         |

# LIST OF ATTACHMENTS

The following chart provides a convenient listing of attachments with their reference page numbers as a quick reference for parts ordering.

| <b>Consists of:</b>   | <b>Page</b> |
|---|-------------|
| 191-5537 <b>ADDITIONAL GEAR TRAIN FOR AUXILIARY PUMP</b> .....    | 355         |
| 193-6784 <b>AIR PREFILTER</b> .....                               | 91          |
| 183-1037 <b>ALARM, TRAVEL</b> .....                               | 229         |
| <br><b>BOOM</b>   |             |
| 167-7309    M-BOOM, MASS 5.3M .....                               | 699         |
| 167-7307    R-BOOM, REACH 5.9M .....                              | 698         |
| 186-1232    R-BOOM, REACH 5.9M (Heavy Duty) .....                 | 698         |
| <br><b>BUCKET</b>   |             |
| <b>EXCAVATION</b>   |             |
| 165-0960    B Family 1220MM Wide-0.9Cu.M.-Adapter Size J300 ..... | 732         |
| 193-4945    D Family 1345MM Wide-1.3Cu.M.-Adapter Size J400 ..... | 732         |
| 193-4943    D Family 1430MM Wide-1.4Cu.M.-Adapter Size J400 ..... | 733         |
| 193-4842    D Family 1500MM Wide-1.5Cu.M.-Adapter Size J400 ..... | 733         |
| 123-5477    S Family 1255MM Wide-1.0Cu.M.-Adapter Size J350 ..... | 730         |
| 123-5478    S Family 1355MM Wide-1.1Cu.M.-Adapter Size J350 ..... | 730         |
| 123-5479    S Family 1315MM Wide-1.2Cu.M.-Adapter Size J350 ..... | 731         |
| For Hammer  |             |
| 127-6883    S Family 1365MM Wide-1.1Cu.M.-Adapter Size J400 ..... | 731         |
| <br><b>BUCKET LINKAGE</b>   |             |
| <b>B FAMILY</b>   |             |
| 163-7739    Casting Type .....                                    | 705         |
| 176-2848    Fabrication Type .....                                | 706         |
| <b>D FAMILY</b> .....   |             |
| 176-2793    .....   | 706         |
| <b>S FAMILY</b> .....   |             |
| 176-2656    .....   | 705         |
| <br><b>CAB</b>  |             |
| 171-7345    METAL ROOF HATCH CAB .....                            | 579         |
| 161-3739    SKYLIGHT HATCH CAB .....                              | 578         |
| 164-0555    WITH ELECTRIC OPENABLE FRONT WINDSHIELD .....         | 580         |
| <br><b>COUNTERWEIGHT</b>  |             |
| 203-5261    EXTRA COUNTERWEIGHT (ADX1-Up, BTE1-Up) .....          | 283         |
| 203-5262    COUNTERWEIGHT (Without Lifting Eye) .....             | 284         |
| <br><b>FILM</b>   |             |
| 186-1231    HAMMER (HBG1-Up) .....                                | 774         |
| 186-1234    HAMMER (KCF-Up) .....                                 | 775         |

# LIST OF ATTACHMENTS

|          | Consists of:                                       | Page |
|----------|--|------|
|          | <b>GUARD</b>                                       |      |
| 214-7946 | BOTTOM, HEAVY DUTY .....                           | 270  |
| 126-2121 | BUCKET CYLINDER .....                              | 386  |
| 164-0534 | WINDSHIELD, FRONT (Full Net) .....                 | 644  |
| 164-0535 | WINDSHIELD, FRONT (Half Net) .....                 | 646  |
| 178-5549 | FOGS .....   | 640  |
| 171-7485 | Cab Front .....                                    | 642  |
| 164-0497 | Cab Top .....                                      | 641  |
| 235-7810 | SIDE RUBBER BUMPER (ADX1-Up, BTE1-Up) .....        | 300  |
| 192-8430 | SIDE RUBBER BUMPER (HBG1-Up, KCF1-Up) .....        | 302  |
| 134-8879 | Swivel (ADX1-Up, BTE1-Up) .....                    | 274  |
|          | <b>TRACK GUIDE</b>                                 |      |
| 120-7171 | Track End Guide (ADX1-Up, HBG1-Up) .....           | 316  |
| 120-7173 | Track End Guide (BTE1-Up, KCF1-Up) .....           | 317  |
| 177-2835 | <b>HAND CONTROL PATTERN CHANGER (4 WAYS)</b> ..... | 423  |
| 178-5599 | <b>HEATER &amp; DEFROSTER</b> .....                | 686  |
|          | <b>HYDRAULIC SYSTEMS, AUXILIARY</b>                |      |
|          | <b>BOOM LINE GROUPS</b>                            |      |
|          | R-Boom (5.9M)                                      |      |
| 179-5108 | Drain Lines .....                                  | 408  |
| 179-5094 | High Pressure Lines .....                          | 396  |
| 179-5100 | Medium Pressure Lines .....                        | 402  |
|          | <b>STICK LINE GROUPS</b>                           |      |
|          | M2.5D Stick & R2.5S Stick                          |      |
| 179-5287 | Drain Lines .....                                  | 411  |
| 188-0050 | High Pressure Lines .....                          | 400  |
| 179-5286 | Medium Pressure Lines .....                        | 406  |
|          | R2.95S Stick                                       |      |
| 179-5132 | Drain Lines .....                                  | 410  |
| 179-5125 | High Pressure Lines .....                          | 398  |
| 179-5126 | Medium Pressure Lines .....                        | 404  |
|          | <b>TOOL CONTROL</b>                                |      |
| 179-5160 | Auxiliary Pump .....                               | 423  |
|          | Combined Function                                  |      |
| 202-7072 | 2 Pump .....                                       | 421  |
| 202-7073 | 2 Pump (Medium Pressure) .....                     | 422  |

# LIST OF ATTACHMENTS

|          | Consists of:  |  | Page   |
|----------|---|--|--------|
|          | Single Function                                     |  |        |
| 202-7070 | 1 Pump .....  |  | 420    |
| 202-7071 | 2 Pump .....  |  | 420    |
| 187-6777 | <b>HYDRAULIC TANK</b> .....                         |  | 333    |
| 196-1421 | <b>LARGE BOX COVER</b> .....                        |  | 626    |
|          | <b>LIGHT</b>  |  |        |
| 116-0190 | M-BOOM, RIGHT SIDE .....                            |  | 244    |
| 116-0189 | R-BOOM, RIGHT SIDE .....                            |  | 242    |
|          | <b>WORKING, CAB MOUNT</b>                           |  |        |
| 163-6772 | With Falling Object .....                           |  | 232    |
| 170-9294 | Without Falling Object .....                        |  | 234    |
|          | <b>WORKING, CAB MOUNT (Time Delay)</b>              |  |        |
| 163-6631 | With Falling Object .....                           |  | 236    |
| 204-1810 | Without Falling Object .....                        |  | 238    |
|          | <b>LONG REACH FRONT - 322CL ONLY</b>                |  |        |
|          | BUCKET  |  |        |
| 7Y-6402  | 810MM Wide-0.45Cu.M.-Backhoe (BTE1-Up) .....        |  | 741.01 |
| 121-1807 | 1140MM Wide-0.6Cu.M.-Ditch Cleaning (BTE1-Up) ..... |  | 741.02 |
| 216-6592 | LONG REACH FRONT (BTE1-Up) .....                    |  | 707    |
|          | <b>OPTIONAL SEAT</b>                                |  |        |
| 161-3781 | KAB 527P SEAT .....                                 |  | 663    |
| 164-0502 | KAB 527P SEAT (With Seat Heater) .....              |  | 661    |
| 171-7352 | KAB T1P/C SEAT .....                                |  | 664    |
| 178-5624 | KAB T8P SEAT .....                                  |  | 662    |
| 164-0477 | HEADREST(For KAB 528P, KAB T8P Seat) .....          |  | 670    |
|          | <b>RADIO</b>  |  |        |
| 163-6634 | AM .....  |  | 637    |
| 163-6633 | AM/FM .....   |  | 638    |
| 163-6636 | AM/FM (With Cassette) .....                         |  | 639    |
| 161-3750 | <b>RAIN PROTECTOR, CAB FRONT</b> .....              |  | 647    |
|          | <b>SIDE CUTTER</b>                                  |  |        |
| 7Y-0729  | B FAMILY .....                                      |  | 745    |
| 7Y-0366  | D, S FAMILY .....                                   |  | 745    |
|          | <b>STARTING, COLD WEATHER</b>                       |  |        |
| 186-1142 | FILM (32WR Hydraulic Oil Package) .....             |  | 780    |
| 209-2833 | STARTING AID .....                                  |  | 212    |

# LIST OF ATTACHMENTS

|          | Consists of:                                | Page |
|----------|---|------|
|          | <b>STICK</b>                                |      |
|          | <b>STICK-FOR THE MASS (5.3M) BOOM ONLY</b>  |      |
| 176-2654 | M2.5D Stick .....                           | 704  |
| 179-5295 | M2.5D Stick/Auxiliary .....                 | 704  |
|          | <b>STICK-FOR THE REACH (5.9M) BOOM ONLY</b> |      |
| 167-7312 | R2.5S Stick .....                           | 703  |
| 179-5283 | R2.5S Stick/Auxiliary .....                 | 703  |
| 167-7311 | R2.95S Stick .....                          | 701  |
| 179-5140 | R2.95S Stick/Auxiliary .....                | 701  |
| 186-1233 | R2.95S Stick (Heavy Duty) .....             | 702  |
| 167-7313 | R3.6B Stick .....                           | 700  |
| 179-5289 | R3.6B Stick/Auxiliary .....                 | 700  |
| 161-3751 | <b>SUN VISOR</b> .....                      | 648  |
|          | <b>TIP</b>                                  |      |
|          | <b>ADAPTER SIZE J300</b>                    |      |
| 8E-3756  | Abrasion, Heavy Duty .....                  | 756  |
| 9J-3167  | Long .....                                  | 754  |
| 8E-3751  | Long, Heavy Duty .....                      | 754  |
| 3G-3237  | Penetration .....                           | 756  |
| 9W-9188  | Sharp-Center .....                          | 757  |
| 9W-9189  | Sharp-Corner .....                          | 757  |
| 9J-3175  | Short .....                                 | 755  |
| 4T-2215  | Wide .....                                  | 755  |
|          | <b>ADAPTER SIZE J350</b>                    |      |
| 8E-3757  | Abrasion, Heavy Duty .....                  | 748  |
| 8J-4955  | Long .....                                  | 746  |
| 8E-3752  | Long, Heavy Duty .....                      | 746  |
| 3G-3236  | Penetration .....                           | 748  |
| 9W-6472  | Sharp-Center .....                          | 749  |
| 9W-6473  | Sharp-Corner .....                          | 749  |
| 8J-4954  | Short .....                                 | 747  |
| 8J-4953  | Wide .....                                  | 747  |
|          | <b>ADAPTER SIZE J400</b>                    |      |
| 8E-0837  | Abrasion, Heavy Duty .....                  | 752  |
| 127-0716 | Long .....                                  | 750  |
| 6Y-5472  | Long, Heavy Duty .....                      | 750  |
| 8E-0838  | Penetration .....                           | 752  |
| 8E-0840  | Sharp-Center .....                          | 753  |
| 8E-0839  | Sharp-Corner .....                          | 753  |
| 127-0715 | Short .....                                 | 751  |
| 8E-0836  | Wide .....                                  | 751  |



# LIST OF ATTACHMENTS

| <b>Consists of:</b>   |   | <b>Page</b> |
|-----------------------|---|-------------|
| <b>TOOL</b>           |   |             |
| 176-2676              | TOOL KIT .....                          | 758         |
| 71-0776               | TOOL KIT (Deluxe) .....                 | 758         |
| <b>TRACK</b>          |   |             |
| <b>TRIPLE GROUSER</b> |   |             |
| 195-9348              | 600MM (BTE1-Up, KCF1-Up) .....          | 329         |
| 195-9349              | 700MM (BTE1-Up, KCF1-Up) .....          | 329         |
| 195-9346              | 700MM (ADX1-Up, HBG1-Up) .....          | 328         |
| 195-9347              | 800MM (ADX1-Up, HBG1-Up) .....          | 328         |
| 178-5602              | <b>WIPER, LOWER WINDSHIELD</b> .....    | 631         |
| 163-6629              | <b>12V-7A POWER SUPPLY SOCKET</b> ..... | 195         |

# INDEX

| Name                                   | Page   | Name                                   | Page   |
|--|--------|--|--------|
| <b>A</b>                               |        |  |        |
| ADJUSTER GP - BUCKET .....             | 742    | CONDENSER & MTG GP - REFRIGERANT ..... | 696    |
| AIR CLEANER AR .....                   | 91     | CONSOLE GP .....                       | 655    |
| AIR CLEANER GP .....                   | 89     | CONSOLE GP - OPERATOR .....            | 654    |
|  | 92     | CONTROL & MTG GP - ELECTRONIC .....    | 204    |
| AIR CONDITIONER & MOUNTING GP .....    | 672    | CONTROL AR - AUXILIARY .....           | 420    |
| AIR CONDITIONER GP .....               | 671    | CONTROL GP - ELECTRONIC .....          | 203    |
|  | 674    | CONTROL GP - HYDRAULIC .....           | 498    |
| ALARM GP .....                         | 182    | CONTROL GP - PILOT OPERATED HYD .....  | 491    |
| ALARM GP - TRAVEL .....                | 229    |  | 496    |
| ALTERNATOR GP - CHARGING .....         | 216    | COOLER & MOUNTING GP .....             | 77     |
| ARM AS - WIPER .....                   | 623    | COOLER GP - ENGINE OIL .....           | 83     |
| <b>B</b>                               |        |  |        |
| BATTERY & WIRING GP .....              | 122    | COOLER GP - OIL .....                  | 78     |
| BATTERY & WIRING GP - COLD WEATH ..... | 130    | COUNTERWEIGHT GP .....                 | 282    |
| BLOCK GP - HYDRAULIC .....             | 362    | COUPLING GP - FLEXIBLE .....           | 345    |
| BLOWER GP .....                        | 678    | COUPLING GP - PUMP .....               | 344    |
| BOOM AR .....                          | 699    | COVER GP .....                         | 265    |
| BOOM AR - 1 PIECE LONG .....           | 698    |  | 604    |
| BOOM GP .....                          | 708    |  | 625    |
| BOX & MTG GP - STORAGE .....           | 277    | COVER GP - AIR INLET .....             | 96     |
| BOX GP - STORAGE .....                 | 278    | COVER GP - CYLINDER BLOCK .....        | 24     |
| BREATHER GP .....                      | 60     | COVER GP - FRONT HOUSING .....         | 48     |
| BUCKET & ADJUSTER GP .....             | 734    | COVER GP - STORAGE BOX .....           | 280    |
| BUCKET AR .....                        | 730    | COVER GP - VALVE MECHANISM .....       | 43     |
| BUCKET AS - DITCH CLEANING .....       | 741.02 | CRANKSHAFT GP .....                    | 26     |
| BUCKET AS - EXCAVATION .....           | 738    | CYLINDER & LINES GP - BOOM .....       | 363    |
| BUCKET AS - GENERAL PURPOSE .....      | 741.01 | CYLINDER & LINES GP - BUCKET .....     | 365    |
| BUCKET GP .....                        | 741.01 | CYLINDER & LINES GP - STICK .....      | 364    |
| BUMPER GP - SIDE .....                 | 300    | CYLINDER & SEAL GP - BOOM .....        | 368    |
| <b>C</b>                               |        |  |        |
| CAB GP .....                           | 578    | CYLINDER & SEAL GP - BUCKET .....      | 372    |
| CAB GP (BASIC) .....                   | 581    | CYLINDER & SEAL GP - STICK .....       | 370    |
| CAB GP - EXTERIOR .....                | 602    | CYLINDER BLOCK AS .....                | 20     |
| CAB GP - INTERIOR .....                | 590    | CYLINDER BLOCK GP .....                | 18     |
| CABLE AS .....                         | 140    | CYLINDER GP - BUCKET .....             | 378    |
| CAMSHAFT GP .....                      | 30     | CYLINDER GP - STICK .....              | 371.05 |
| CARRIER GP - SEAL .....                | 23     | CYLINDER HEAD AS .....                 | 40     |
| COMPRESSOR GP - REFRIGERANT .....      | 697    | CYLINDER HEAD GP .....                 | 33     |
| <b>D</b>                               |        |  |        |
|  |        | DAMPER & PULLEY GP .....               | 32     |
|  |        | DOOR GP - CAB .....                    | 605    |
|  |        | DOOR GP - HOOD .....                   | 266    |
|  |        | DRIVE AS - WINDSHIELD - AUTO .....     | 616    |
|  |        | DRIVE GP - FAN .....                   | 54     |

# INDEX

| Name                                  | Page | Name                          | Page   |
|---------------------------------------|------|-------------------------------|--------|
| DRIVE GP - PUMP .....                 | 355  | GUARD GP - TRAVEL MOTOR ..... | 325    |
| DRIVE GP - SWING .....                | 473  |                               |        |
| DUCT AS.....                          | 682  | <b>H</b>                      |        |
| DUCT GP - AIR .....                   | 680  | HANDHOLD GP .....             | 275    |
| <b>E</b>                              |      | HARNASS AS.....               | 132    |
| ELBOW GP - AIR INLET.....             | 97   |                               | 152    |
| ELECTRONICS GP .....                  | 202  |                               | 201    |
| ENGINE AR.....                        | 11   |                               | 250    |
| ENGINE AR - COMPLETE .....            | 12   | HARNASS AS - CONSOLE .....    | 251.01 |
| ENGINE AR - CORE.....                 | 16   | HARNASS AS - WIRING.....      | 169    |
| <b>F</b>                              |      |                               | 183    |
| FAN GP - SUCTION .....                | 82   |                               | 192    |
| FASTENER GP - FRONT HOUSING.....      | 50   |                               | 196    |
| FASTENER GP - LIFTING .....           | 29   |                               | 200    |
| FASTENER GP - SWING & FINAL DR.....   | 256  | HATCH AS.....                 | 611    |
| FENDER & COVER GP .....               | 281  | HATCH GP .....                | 609    |
| FILM GP .....                         | 774  | HEAD GP - PUMP CONTROL.....   | 350    |
| FILTER GP.....                        | 117  | HEADREST AS.....              | 670    |
| FILTER GP - ENGINE OIL.....           | 64   | HEATER & MTG GP - CAB.....    | 688    |
| FILTER GP - FUEL .....                | 114  | HEATER AR - CAB .....         | 686    |
| FILTER GP - HYDRAULIC .....           | 356  | HEATER GP - AIR INLET.....    | 219    |
| FINAL DRIVE GP .....                  | 253  | HEATER GP - CAB .....         | 690    |
| FLYWHEEL GP.....                      | 56   | HOOD & GUARD GP.....          | 258    |
| FRAME AS - UNDERCARRIAGE .....        | 303  | HOOD GP.....                  | 268    |
| FRAME GP - UPPER.....                 | 296  | HOOD GP - ENGINE.....         | 264    |
| FUMES DISPOSAL GP .....               | 61   | HORN GP - ELECTRIC.....       | 649    |
| <b>G</b>                              |      | HOUSING GP - FLYWHEEL .....   | 57     |
| GAUGE GP - OIL LEVEL (DIPSTICK) ..... | 67   | HOUSING GP - FRONT.....       | 47     |
| GEAR & BEARING GP - SWING.....        | 288  | <b>I</b>                      |        |
| GEAR GP - FRONT .....                 | 52   | IDLER GP - FRONT .....        | 307    |
| GUARD AR - BOTTOM .....               | 270  | <b>K</b>                      |        |
| GUARD AR - OVERHEAD .....             | 640  | KNOB AS.....                  | 493    |
| GUARD GP - BOTTOM .....               | 271  | <b>L</b>                      |        |
| GUARD GP - CYLINDER.....              | 386  | LAMP GP - FLOOD.....          | 246    |
| GUARD GP - FRONT WINDOW.....          | 642  | LEVER GP .....                | 652    |
| GUARD GP - OVERHEAD.....              | 641  | LIFTER GP - VALVE.....        | 46     |
| GUARD GP - SWIVEL .....               | 274  | LIFTING GP - ENGINE .....     | 28     |
| GUARD GP - TRACK GUIDE .....          | 315  |                               |        |

# INDEX

| Name                                | Page   | Name                                 | Page |
|-------------------------------------|--------|--------------------------------------|------|
| LIGHTING GP - BOOM.....             | 240    | MOTOR & MTG GP - TRAVEL.....         | 481  |
| LIGHTING GP - CAB.....              | 232    | MOTOR AS - WINDOW WIPER.....         | 624  |
| LIGHTING GP - CHASSIS.....          | 230    | MOTOR GP - FAN DRIVE.....            | 484  |
| LINES GP - AIR.....                 | 94     | MOTOR GP - SWING.....                | 477  |
| LINES GP - AIR CONDITIONER.....     | 684    | MOTOR GP - TRAVEL.....               | 482  |
| LINES GP - AUXILIARY HYDRAULIC..... | 396    | MOUNTING GP - ENGINE.....            | 59   |
| LINES GP - BOOM.....                | 388    | MOUNTING GP - ENGINE OIL FILTER..... | 71   |
| LINES GP - BOOM CYLINDER.....       | 380    | MOUNTING GP - GREASE GUN.....        | 269  |
| LINES GP - BUCKET CYLINDER.....     | 383    | MOUNTING GP - VALVE.....             | 502  |
| LINES GP - COOLING.....             | 80     | MUFFLER GP.....                      | 102  |
| LINES GP - DRAIN.....               | 103    |                                      |      |
|                                     | 408    |                                      |      |
|                                     | 468    |                                      |      |
| LINES GP - ENGINE OIL.....          | 62     |                                      |      |
| LINES GP - FRONT.....               | 450    |                                      |      |
| LINES GP - FUEL.....                | 110    |                                      |      |
| LINES GP - GREASE.....              | 723    |                                      |      |
| LINES GP - HEATER.....              | 694    |                                      |      |
| LINES GP - MOTOR.....               | 418    |                                      |      |
| LINES GP - OIL DRAIN.....           | 70     |                                      |      |
| LINES GP - PILOT.....               | 424    |                                      |      |
| LINES GP - PUMP.....                | 416    |                                      |      |
| LINES GP - RETURN & FILTER.....     | 470    |                                      |      |
| LINES GP - STICK.....               | 392    |                                      |      |
| LINES GP - STICK CYLINDER.....      | 382    |                                      |      |
| LINES GP - SWING MOTOR.....         | 472    |                                      |      |
| LINES GP - TRAVEL MOTOR.....        | 412    |                                      |      |
| LINES GP - TURBOCHARGER OIL.....    | 66     |                                      |      |
| LINES GP - WATER.....               | 86     |                                      |      |
| LINK AS.....                        | 657    |                                      |      |
| LINK AS - TRACK.....                | 330    |                                      |      |
| LINKAGE AR - BUCKET.....            | 705    |                                      |      |
| LINKAGE AR - FRONT.....             | 707    |                                      |      |
| LINKAGE GP - BUCKET.....            | 726    |                                      |      |
| LITERATURE GP.....                  | 671    |                                      |      |
| LOCK GP - TRANSPORT.....            | 725.02 |                                      |      |

## M

|                                  |     |
|----------------------------------|-----|
| MANIFOLD GP - EXHAUST.....       | 99  |
| MIRROR GP - REAR VIEW.....       | 650 |
| MONITOR & MTG GP - OPERATOR..... | 628 |
| MONITOR GP - OPERATOR.....       | 629 |
| MOTOR & MTG GP - SWING.....      | 476 |

## P

|                                  |     |
|----------------------------------|-----|
| PAN GP - OIL.....                | 58  |
| PANEL GP - CIRCUIT BREAKER.....  | 144 |
| PISTON & ROD GP.....             | 31  |
| PLATE & FILM GP.....             | 762 |
| PLATFORM GP - OPERATOR.....      | 651 |
| PLUG GP.....                     | 520 |
|                                  | 534 |
|                                  | 577 |
| PLUG GP - ENGINE.....            | 21  |
| PULLEY GP.....                   | 53  |
| PUMP & MOUNTING GP.....          | 105 |
|                                  | 343 |
| PUMP GP - ENGINE OIL.....        | 68  |
| PUMP GP - FUEL PRIMING.....      | 116 |
| PUMP GP - GEAR.....              | 354 |
| PUMP GP - MAIN HYDRAULIC.....    | 346 |
| PUMP GP - UNIT INJECTION.....    | 108 |
| PUMP GP - UNIT INJECTOR HYD..... | 106 |
| PUMP GP - WATER.....             | 84  |

## R

|  |     |
|--|-----|
| RADIATOR & AFTERCOOLER GP.....         | 72  |
| RADIATOR GP.....                       | 74  |
| RADIO GP - AM.....                     | 637 |
| RADIO GP - AM/FM.....                  | 638 |
| ROLLER AR - TRACK & CARRIER.....       | 318 |
| ROLLER GP - TRACK CARRIER.....         | 322 |
| ROLLER GP - TRACK - DOUBLE FLANGE..... | 324 |
| ROLLER GP - TRACK - SINGLE FLANGE..... | 323 |
| ROTATING GP - PUMP.....                | 486 |

# INDEX

| Name                               | Page   | Name                                   | Page   |
|------------------------------------|--------|--|--------|
| ROTOR GP - SWIVEL .....            | 488    | TANK & MTG GP - FUEL.....              | 119    |
|                                    |        | TANK & MTG GP - HYDRAULIC.....         | 332    |
| <b>S</b>                           |        | TANK AS - WINDOW WASHER.....           | 636    |
| SCREEN GP .....                    | 342    | TANK GP - FUEL .....                   | 120    |
| SEAL GP - CRANKSHAFT .....         | 27     | TIMER AS .....                         | 165    |
| SEAL GP - FUEL INJECTOR .....      | 109    |  | 249    |
| SEAT BELT GP.....                  | 668    | TIP GP .....                           | 749    |
| SEAT GP .....                      | 659    |  | 753    |
| SENSOR GP - ENGINE .....           | 222    |  | 757    |
| SENSOR GP - PRESSURE.....          | 223    | TIP GP - ABRASION.....                 | 748    |
| SENSOR GP - SPEED .....            | 228    |  | 752    |
| SENSOR GP - TEMPERATURE.....       | 227    |  | 756    |
| SIDECUTTER GP.....                 | 745    | TIP GP - LONG .....                    | 746    |
| SPROCKET GP - NONSEGMENTED .....   | 252    |  | 750    |
| STARTING AR - COLD WEATHER.....    | 212    |  | 754    |
| STARTING MOTOR GP - ELECTRIC ..... | 206    |  | 757.01 |
|                                    | 213    | TIP GP - PENETRATION .....             | 748    |
|                                    |        |  | 752    |
| STICK AR .....                     | 700    |  | 756    |
|                                    | 703    | TIP GP - SHORT.....                    | 747    |
| STICK AR - HOE .....               | 700    |  | 751    |
|                                    | 702    |  | 755    |
| STICK GP .....                     | 715    | TIP GP - WIDE.....                     | 747    |
|                                    | 717    |  | 751    |
|                                    | 720    |  | 755    |
|                                    | 722    | TOOL AR .....                          | 758    |
| STICK GP - HOE.....                | 714    | TOOL GP.....                           | 759    |
|                                    | 716    | TRACK ADJUSTER & RECOIL GP.....        | 311    |
|                                    | 718    | TRACK GP.....                          | 327    |
|                                    | 721    | TURBOCHARGER GP.....                   | 100    |
|                                    | 722.01 |  |        |
| SUPPORT GP - SEAT .....            | 658    | <b>V</b>                               |        |
| SUSPENSION GP - SEAT.....          | 665    | VALVE & MOUNTING GP.....               | 503    |
| SWITCH AS.....                     | 251    | VALVE AR - 4 WAY .....                 | 423    |
| SWITCH AS - DISCONNECT.....        | 160    | VALVE AS - BALL .....                  | 574    |
| SWITCH AS - MAGNETIC.....          | 162    | VALVE GP.....                          | 527    |
| SWITCH AS - ROLLER.....            | 251    | VALVE GP - CHECK.....                  | 557    |
| SWITCH AS - ROTARY .....           | 178    | VALVE GP - CONTROL .....               | 508    |
| SWITCH GP - START .....            | 177    |  | 530    |
| SWIVEL GP .....                    | 487    |  | 540    |
|                                    |        | VALVE GP - CUSHION CROSSOVER RLF ..... | 544    |
| <b>T</b>                           |        | VALVE GP - FLOW CONTROL & RELIEF.....  | 535    |
| TANK & FILTER GP - HYDRAULIC.....  | 334    | VALVE GP - MAIN CONTROL .....          | 505.01 |

# INDEX

| Name                                | Page | Name | Page |
|-------------------------------------|------|------|------|
| VALVE GP - PILOT .....              | 489  |      |      |
|                                     | 560  |      |      |
| VALVE GP - PILOT RELIEF .....       | 523  |      |      |
|                                     | 538  |      |      |
| VALVE GP - PRESS REDUCING SOL ..... | 554  |      |      |
| VALVE GP - PRESSURE CONTROL.....    | 107  |      |      |
| VALVE GP - PRESSURE REDUCING .....  | 553  |      |      |
| VALVE GP - RELIEF .....             | 522  |      |      |
|                                     | 526  |      |      |
|                                     | 528  |      |      |
|                                     | 536  |      |      |
|                                     | 543  |      |      |
|                                     | 547  |      |      |
| VALVE GP - SELECTOR .....           | 558  |      |      |
| VALVE GP - SHUTTLE .....            | 572  |      |      |
| VALVE GP - SOLENOID.....            | 555  |      |      |
| VALVE GP - TRACTION CONTROL.....    | 546  |      |      |
| VALVE MECHANISM GP.....             | 44   |      |      |
| VISOR GP - PROTECTION - RAIN.....   | 647  |      |      |
| VISOR GP - SUN.....                 | 648  |      |      |

## W

|                                  |     |
|----------------------------------|-----|
| WASHER GP - WINDOW .....         | 634 |
| WINDOW AS.....                   | 619 |
| WINDOW GP.....                   | 612 |
|                                  | 617 |
|                                  | 620 |
| WINDOW GP - DOOR.....            | 608 |
| WIPER & WASHER GP - WINDOW ..... | 632 |
| WIPER AR - WINDOW .....          | 631 |
| WIPER GP - WINDOW .....          | 622 |
| WIRING GP .....                  | 191 |
|                                  | 195 |
|                                  | 197 |
| WIRING GP - CAB.....             | 180 |
| WIRING GP - CONSOLE .....        | 166 |
| WIRING GP - ENGINE .....         | 220 |
| WIRING GP - HEATER.....          | 218 |
| WIRING GP - LOWER WIPER.....     | 194 |

# ENGINE ARRANGEMENT

Consists of :

|   |          |                         | Page |
|---|----------|-------------------------|------|
| 1 | 209-5361 | ENGINE AR-COMPLETE..... | 12   |
| 1 | 183-8151 | MUFFLER GP.....         | 102  |
| 1 | 135-5803 | FAN GP-SUCTION .....    | 82   |

H80624E 00

205-6719 ENGINE AR

# ENGINE ARRANGEMENT

Consists of :

|   |          |                                | Page |
|---|----------|--------------------------------|------|
|   |          | ENGINE ARRANGEMENT             |      |
| 1 | 209-5362 | ENGINE AR-CORE.....            | 16   |
|   |          | BASIC ENGINE                   |      |
| 1 | 194-1682 | COVER GP-CYLINDER BLOCK.....   | 24   |
| 1 | 162-8068 | PLUG GP-ENGINE.....            | 22   |
| 1 | 154-7192 | FASTENER GP-FRONT HOUSING..... | 51   |
| 1 | 116-4556 | FASTENER GP-FRONT HOUSING..... | 50   |
| 1 | 159-0303 | PLUG GP-ENGINE.....            | 21   |
| 1 | 135-5035 | COVER GP-VALVE MECHANISM.....  | 43   |
| 1 | 142-8100 | LIFTING GP-ENGINE.....         | 28   |
| 1 | 113-6170 | FASTENER GP-LIFTING.....       | 29   |
| 1 | 177-5196 | DAMPER & PULLEY GP.....        | 32   |
| 1 | 178-2492 | PULLEY GP.....                 | 53   |
| 1 | 118-1727 | COVER GP-FRONT HOUSING.....    | 48   |
| 1 | 7W-8813  | HOUSING GP-FLYWHEEL.....       | 57   |
| 1 | 177-4813 | FLYWHEEL GP.....               | 56   |
| 1 | 132-3844 | CARRIER GP-SEAL.....           | 23   |
| 1 | 136-8888 | COVER GP-FRONT HOUSING.....    | 49   |
| 1 | 176-9429 | PAN GP-OIL.....                | 58   |
| 1 | 183-5780 | DRIVE GP-FAN.....              | 54   |
| 1 | 115-4203 | SEAL GP-CRANKSHAFT.....        | 27   |

H84540E 01



# ENGINE ARRANGEMENT

Consists of :

|                              |          |                                     | Page |
|------------------------------|----------|-------------------------------------|------|
| LUBRICATION SYSTEM           |          |                                     |      |
| 1                            | 177-4814 | GAUGE GP-OIL LEVEL (DIPSTICK) ..... | 67   |
| 1                            | 70-2475  | LINES GP-ENGINE OIL.....            | 62   |
| 1                            | 194-1685 | FILTER GP-ENGINE OIL .....          | 64   |
| 1                            | 194-1684 | FUMES DISPOSAL GP .....             | 61   |
| 1                            | 159-0285 | LINES GP-TURBOCHARGER OIL .....     | 66   |
| COOLING SYSTEM               |          |                                     |      |
| 1                            | 177-9823 | PUMP GP-WATER.....                  | 84   |
| 1                            | 192-9972 | LINES GP-WATER.....                 | 86   |
| AIR INLET AND EXHAUST SYSTEM |          |                                     |      |
| 1                            | 153-1794 | COVER GP-AIR INLET .....            | 96   |
| 1                            | 127-3466 | MANIFOLD GP-EXHAUST .....           | 99   |
| 1                            | 194-1683 | ELBOW GP-AIR INLET.....             | 97   |
| FUEL SYSTEM                  |          |                                     |      |
| 1                            | 183-2860 | LINES GP-FUEL .....                 | 110  |

H84541E 01

# ENGINE ARRANGEMENT

Consists of :

|                                |          | Page                                 |
|--------------------------------|----------|--------------------------------------|
| ELECTRICAL AND STARTING SYSTEM |          |                                      |
| 1                              | 159-1822 | SENSOR GP-ENGINE..... 222            |
| 1                              | 177-6972 | ALTERNATOR GP-CHARGING ..... 216     |
| 1                              | 183-1195 | CONTROL & MTG GP-ELECTRONIC..... 205 |
| 1                              | 201-4204 | STARTING MOTOR GP-ELECTRIC ..... 206 |
| 1                              | 190-6186 | SENSOR GP-SPEED ..... 228            |
| 1                              | 190-5038 | WIRING GP-ENGINE..... 220            |
| 1                              | 194-1686 | WIRING GP-HEATER ..... 218           |
| 1                              | 118-7284 | HEATER GP-AIR INLET..... 219         |
| OPERATOR STATION               |          |                                      |
| 1                              | 183-8088 | COMPRESSOR GP-REFRIGERANT..... 697   |

H84542E 01

# MEMORANDA

## ENGINE ARRANGEMENT

Consists of :

|                    |          |                           | Page |
|--------------------|----------|---------------------------|------|
| BASIC ENGINE       |          |                           |      |
| 1                  | 161-4276 | CAMSHAFT GP.....          | 30   |
| 1                  | 113-6087 | CRANKSHAFT GP .....       | 26   |
| 1                  | 129-1165 | CYLINDER BLOCK GP .....   | 18   |
| 1                  | 133-3742 | CYLINDER HEAD GP.....     | 33   |
| 1                  | 101-4540 | GEAR GP-FRONT .....       | 52   |
| 6                  | 161-8420 | PISTON & ROD GP.....      | 31   |
| 1                  | 135-2969 | VALVE MECHANISM GP .....  | 44   |
| 1                  | 133-5055 | HOUSING GP-FRONT .....    | 47   |
| LUBRICATION SYSTEM |          |                           |      |
| 1                  | 115-4138 | PUMP GP-ENGINE OIL.....   | 68   |
| 1                  | 128-2682 | BREATHER GP .....         | 60   |
| 1                  | 176-1387 | LINES GP-ENGINE OIL.....  | 63   |
| COOLING SYSTEM     |          |                           |      |
| 1                  | 177-6968 | COOLER GP-ENGINE OIL..... | 83   |

H80628E 01