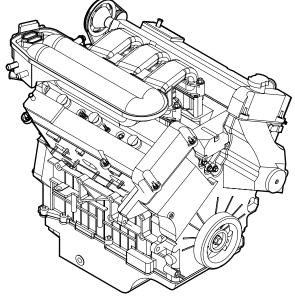
OF 9165 MINIL

CONFEDE



3 CLITER GAS

Ford Duratec

ENGINE PARTS MANUAL

P.O. BOX 310 EAGLE WI 53119

PRINTED IN U.S.A.

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**LEGEND** 

#### NOTICE!

THE INFORMATION IN THIS MANUAL IS KNOWN TO BE ACCURATE AS OF THE DATE OF RELEASE SHOWN ON THE COVER. HOWEVER, ENGINEERING CHANGES CAN OCCUR WITHOUT NOTICE. TO OBTAIN THE PROPER PARTS, PLEASE BE SURE TO USE THE MODEL NUMBER OF THE UNIT BEING SERVICED WHEN ORDERING FROM THIS MANUAL.

<sup>&</sup>quot;AR" AS REQUIRED

<sup>&</sup>quot;STD" STANDARD SIZE

<sup>&</sup>quot;O.S." OVERSIZE

<sup>&</sup>quot;U.S." UNDERSIZE

<sup>&</sup>quot;NA" NOT AVAILABLE

### 3.0L GAS ENGINE QUICK REFERENCE GUIDE

#### QUICK REFERENCE ENGINE PARTS

| ENGINE SIZE: 3.0 Liter      | FUEL: Gas   | MAKE: For       | d EN          | IGINE P/N: | 0F9765 | MODEL: — |
|-----------------------------|-------------|-----------------|---------------|------------|--------|----------|
| OIL CAPACITY: 1.0 gallons ( | /w/filter)  | COOLANT CAPACIT | Y: 4.0        | gallons -  | User   | Notes    |
| SCHEDULED MAINTENANCE KITS  |             |                 |               |            |        |          |
| De                          | scription   | Part Nu         | umber         |            |        |          |
|                             | Oil/Air     |                 | NA            |            |        |          |
|                             | _           |                 | _             |            |        |          |
| COMMON REFERENCE PARTS      | 1           |                 |               |            |        |          |
| Description                 | Part Number |                 | Special Notes | S          |        |          |
| Oil Filter (Main)           | 0D5419      |                 |               |            |        |          |
| Fuel Filter                 | NA          |                 |               |            |        |          |
| _Air Cleaner Element        |             |                 | eck BOM       |            |        |          |
| _V-Belt                     | 0D3488N     | Se              | rpentine      |            |        |          |
| Thermostat                  | 075885      |                 |               |            |        |          |
| Thermostat Gasket           | 048665      |                 |               |            |        |          |
| Water Pump                  | 0F9225      |                 |               |            |        |          |
| Starter Motor               | 0E9747      |                 |               |            |        |          |
| _Spark Plug                 | 0F97650226  |                 |               |            |        |          |
|                             |             |                 |               |            |        |          |
| ADDITIONAL REFERENCE PARTS  |             |                 |               |            |        |          |
| Alternator                  | 0E9868A     |                 |               |            |        |          |
| Ignition Coil               | 0F9228      |                 |               |            |        |          |
|                             |             |                 |               |            |        |          |
|                             |             |                 |               |            |        |          |
|                             |             |                 |               |            |        |          |
|                             |             |                 |               |            |        |          |

### **Engine Oil Recommendations**

The unit has been filled with "break in" engine oil at the factory. Use a high-quality detergent oil classified "For Service CC, SD, SE or SF." Detergent oils keep the engine cleaner and reduce carbon deposits. Use oil having the following SAE viscosity rating, based on the ambient temperature range anticipated before the next oil change:

| Temperature                   | Oil Grade (Recommended)        |
|-------------------------------|--------------------------------|
| Above 75° F (24° C)           | SAE 30W                        |
| 40° to 75° F (4.4° to 24° C)  | SAE 20W or 15W-40              |
| 10º to 40º F (-12º to 4.4º C) | SAE 10W or 15W-40              |
| Below 10º F (-12º C)          | SAE 5W-30 (Synthetic) or 5W-20 |

#### Coolant

Use a mixture of half low silicate, ethylene glycol base antifreeze and half soft water. Use only soft water and only low silicate antifreeze. If desired, you may add a high quality rust inhibitor to the recommended coolant mixture. When adding coolant, always add the recommended 50-50 mixture.



Do not remove the radiator pressure cap while the engine is hot or serious burns from boiling liquid or steam could result.





Ethylene glycol base antifreeze is poisonous. Do not use your mouth to siphon coolant from the radiator, recovery bottle or any container. Wash your hands thoroughly after handling. Never store used antifreeze in an open container because animals are attracted to the smell and taste of antifreeze even though it is poisonous to them.



-A CAUTION A-





Do not use any chromate base rust inhibitor with ethylene glycol base antifreeze, or chromium hydroxide ("green slime") will form and cause overheating. Engines that have been operated with a chromate base rust inhibitor must be chemically cleaned before adding ethylene glycol base antifreeze. Using any high silicate antifreeze boosters or additives also will cause overheating. We also recommend that you DO NOT use any soluble oil inhibitor for this equipment.

### 3.0L GAS ENGINE SERVICE RECOMMENDATIONS

### 8 kW - 35 kW Small Standby Generator Sets

Following is a recommended maintenance schedule for Generac small standby and residential generator sets from 8 kW to 35 kW in size, and applies to both diesel engine and gas engine driven units. The established intervals in the schedule are the <u>maximum</u> recommended when the unit is used in an average service application. They will need to be decreased (performed more frequently) if the unit is used in a severe application. Use the unit hour meter or calendar time, whichever occurs first, from the previous maintenance interval to determine the next required maintenance interval.

#### Service Maintenance Interval Information:

The various service maintenance intervals are designated by interval numbers as follows:

**1** An early inspection of the generator set to insure it is ready to operate when required and to identify any potential problem areas.

Performed monthly or following each 10 hours of operation of the unit and requires approximately .5 man-hours per unit to complete.

This inspection may be performed by the end user providing the following safety steps are taken to prevent the engine from starting automatically without warning:

To prevent injury, perform the following steps in the order indicated before starting any maintenance:

- Disable the generator set from starting and/or connecting to the load by setting the control panel Auto-Off-Manual switch to the "OFF" position.
- Remove the control panel fuse.
- Turn off the battery charger.
- Remove the negative battery cable.



The battery charger must be turned off BEFORE removing the battery cable to prevent an over current condition from burning out sensitive control panel components and circuits.

Following all maintenance, reverse these steps to insure the unit is returned to standby setup for normal operation when required.

- **2** A break-in service inspection of the generator set to insure it is ready to operate and carry the load when required, and to identify any potential problem areas.
  - Performed **ONLY ONCE** following the first three months or the first 30 hours of operation after purchase of the unit and requires approximately **2.5 man-hours** per unit to complete.
  - This inspection contains some maintenance tasks which require special tools, equipment, and/or knowledge to accomplish and should be performed only by an authorized Generac Service Dealer.
- **3** An operational inspection of the generator set to insure it is ready to operate and carry the load when required, and to identify any potential problem areas.
  - Performed semi-annually or following each 50 hours of operation of the unit and requires approximately **1.5 man-hours** per unit to complete.
  - This inspection contains some maintenance tasks which require special tools, equipment, and/or knowledge to accomplish and should be performed only by an authorized Generac Service Dealer.
- **4** A mid-level inspection of the generator set to insure it is ready to operate and carry the load when required, and to identify any potential problem areas.
  - Performed annually or following each 100 hours of operation of the unit and requires approximately **4.0 man-hours** per unit to complete.
  - This inspection contains some maintenance tasks which require special tools, equipment, and/or knowledge to accomplish and should be performed only by an authorized Generac Service Dealer.

# GENERAC POWER SYSTEMS, INC.

### RECOMMENDED SCHEDULED MAINTENANCE PROGRAM

SERVICE WORK TO BE PERFORMED BY FACTORY-TRAINED PERSONNEL ONLY.

| <u>DEALER INFORMATION</u>                          | OWNER INFORMATION  |
|--|--|
| NAME:ACCOUNT #:ADDRESS:                            | NAME:ADDRESS:  |
| PHONE: TECHNICIAN: SIGNATURE:                      | SITE:PHONE:  |
| PURCHASE DATE:                                     | START-UP DATE:   |
| APPLICATION: Standby Power                         | Prime Power Rental/Trailerized                                 |
| GENERATOR & TRANSFER                               | R SWITCH INFORMATION   |
| <u>GENERATOR</u>                                   | TRANSFER SWITCH  |
| MODEL NUMBER:                                      | MODEL NUMBER:SERIAL NUMBER:                                    |
| HOUR METER READING at Completion of the Inspection | r  |
|  | IING! <b>A</b> rder indicated before starting any maintenance: |

#### NOTE:

The battery charger must be turned off BEFORE removing the battery cable to prevent an over current condition from burning out sensitive control panel components and circuits.

Following all maintenance, reverse these steps to insure the unit is returned to standby setup for normal operation when required.

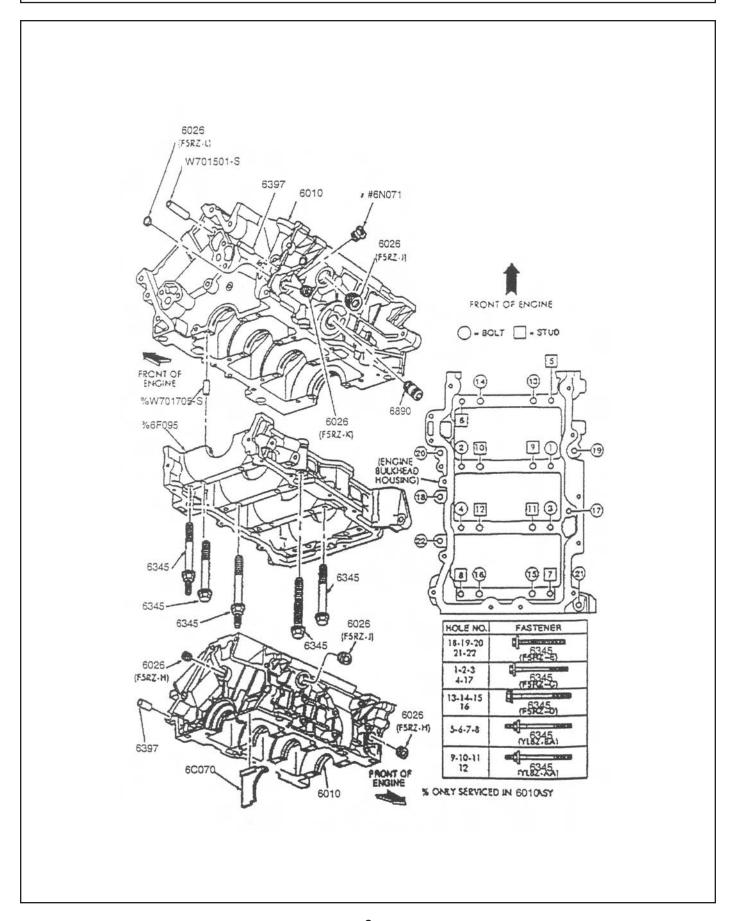
## 3.0L GAS ENGINE SERVICE RECOMMENDATIONS

| Maintenance Tasks   | Level 1                                       |                                      | Level 2   |                                      | Level 3  |                                      | Level 4                                   |                                      |
|---|---|--------------------------------------|---|--------------------------------------|--|--------------------------------------|---|--------------------------------------|
|   | Recommended to<br>be done monthly/<br>10 hrs. | Task<br>Comp.<br>(Date-<br>Initials) | Required to be<br>done 3 months/<br>Break-in /30 hrs. | Task<br>Comp.<br>(Date-<br>Initials) | Required to<br>be done Semi-<br>Annually/50 hrs. | Task<br>Comp.<br>(Date-<br>Initials) | Required to be done<br>Annually/ 100 hrs. | Task<br>Comp.<br>(Date-<br>Initials) |
| 1.Disable the unit from operating per the first page warning.   | 0   |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 2.Check the engine oil level. Adjust as necessary.  | 0   |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 3.Check the engine coolant level.     Adjust as necessary.  | 0   |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 4.Check the engine coolant thermal protection level. Correct as necessary.  |   |                                      |   |                                      |  |                                      | 0   |                                      |
| 5.Check the natural gas delivery system on gas engine driven units. Tighten connections as necessary.                         |   |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 6.Check the diesel fuel supply     level for diesel engine driven     units. Fill as necessary.                               | 0   |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 7.Drain water and sediment from     the diesel fuel tank on diesel     engine driven units.                                   |   |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 8.Drain water from the fuel line water separator on diesel engine driven units if the unit is equipped with one.              |   |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 9.Check the air inlets and outlets for debris. Clean as necessary.  | 0   |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 10.Check the battery electrolyte level if accessible. Adjust as necessary.  | 0   |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 11.Check the battery posts, cables, and charger for loose connections, corrosion, and proper operation. Correct as necessary. | 0   |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 12.Check the unit wiring for loose connections, corrosion, and damage. Correct as necessary.                                  |   |                                      |   |                                      |  |                                      | 0   |                                      |
| 13.Check the engine accessory drive belts for wear, weather cracking, and damage. Replace as necessary.                       |   |                                      |   |                                      |  |                                      | 0   |                                      |

# 3.0L GAS ENGINE SERVICE RECOMMENDATIONS

| Maintenance Tasks   | Level 1                         |                                      | Level 2   |                                      | Level 3  |                                      | Level 4                                   |                                      |
|---|---------------------------------|--------------------------------------|---|--------------------------------------|--|--------------------------------------|---|--------------------------------------|
|   | Recommended to be done monthly/ | Task<br>Comp.<br>(Date-<br>Initials) | Required to be<br>done 3 months/<br>Break-in /30 hrs. | Task<br>Comp.<br>(Date-<br>Initials) | Required to<br>be done Semi-<br>Annually/50 hrs. | Task<br>Comp.<br>(Date-<br>Initials) | Required to be done<br>Annually/ 100 hrs. | Task<br>Comp.<br>(Date-<br>Initials) |
| 14. Visually inspect the unit looking for leaks, wear or damage, loose connections or components, and corrosion. Correct as necessary.  | 0                               |                                      | 0   |                                      | 0  |                                      | 0   |                                      |
| 15.Test the engine and transfer switch safety devices. Correct and/or adjust as necessary.  |                                 |                                      |   |                                      |  |                                      | 0   |                                      |
| 16.Initiate an automatic start and transfer of the unit to site load and exercise it for at least 1 hour looking for leaks, loose connections or components, and abnormal operating conditions. Correct as necessary.                 |                                 |                                      |   |                                      |  |                                      |   |                                      |
| 17. Start and exercise the unit at full rated load (use a load bank if the site load is not enough) for at least 2 hours looking for leaks, loose connections or components, and abnormal operating conditions. Correct as necessary. |                                 |                                      |   |                                      |  |                                      | 0   |                                      |
| 18.Change the engine oil.   |                                 |                                      |   |                                      |  |                                      | 0   |                                      |
| 19.Replace the engine oil filter(s).  |                                 |                                      | 0   |                                      |  |                                      | 0   |                                      |
| 20.Replace the engine air filter(s).  |                                 |                                      | 0   |                                      |  |                                      | 0   |                                      |
| 21.Replace the engine fuel filter(s) on diesel engine driven units and re-prime the fuel system.  |                                 |                                      | 0   |                                      |  |                                      | 0   |                                      |
| 22.Check the engine spark plugs on gas engine driven units.  Clean and re-gap orreplace as necessary.   |                                 |                                      | 0   |                                      |  |                                      | 0   |                                      |
| 23.Perform a 5 minute no-load operational run of the unit looking for any post service problems.  |                                 |                                      | 0   |                                      |  |                                      | 0   |                                      |
| 24.Return the unit to standby setup for operation when required.  | 0                               |                                      | •   |                                      | 0  |                                      | 0   |                                      |

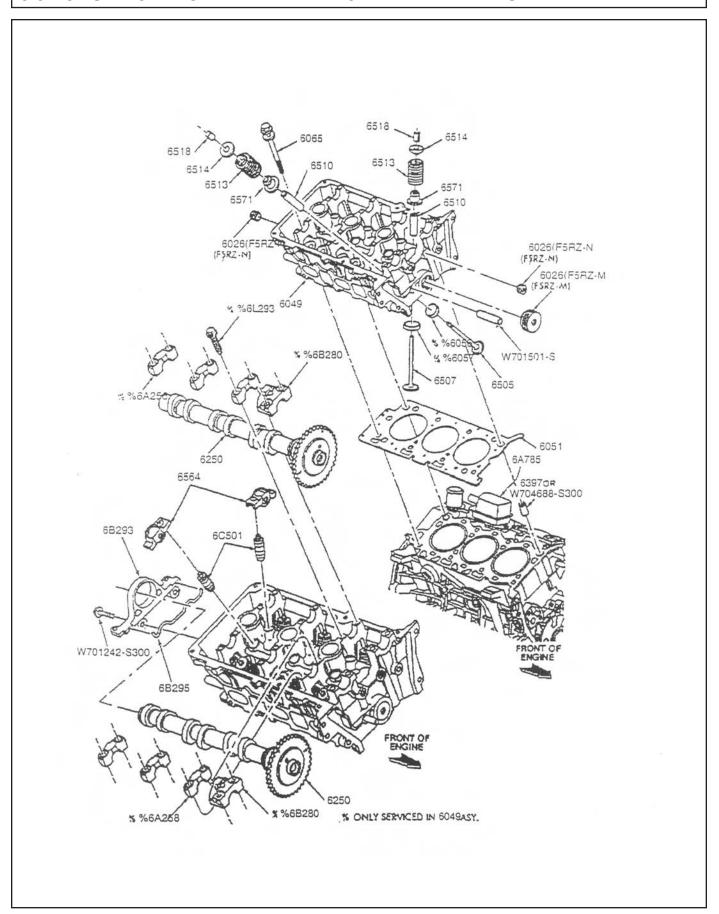
### 3.0L GAS ENGINE CYLINDER BLOCK & RELATED PARTS



# 3.0L GAS ENGINE CYLINDER BLOCK & RELATED PARTS

| ITEM    | PART NUMBER | DESCRIPTION                                     | QTY |
|---------|-------------|---|-----|
|         |             | ENGINE BLOCK                                    |     |
|         | 0F9765      | SHORT BLOCK                                     | 1   |
|         |             | REMAN ENGINE ASSY                               | 1   |
| 6890    | 0F97650100  | OILFILTER MOUNTING INSERT                       | 1   |
| W701501 | 0F97650101  | DOWEL, TIMING CHAIN GUIDE                       | 1   |
|         |             | TIMING COVER                                    |     |
| 6019    | 0F97650102  | FRONT TIMING COVER                              | 1   |
| 6020    | 0F97650103  | TIMING COVER GASKET, RH                         | 1   |
| 6020    | 0F97650104  | TIMING COVER GASKET, CENTER                     | 1   |
| 6020    | 0F97650105  | TIMING COVER GASKET, LH                         | 1   |
| 6700    | 0F97650106  | TIMING COVER SEAL                               | 1   |
| W701525 | 0F97650107  | BOLT,M8 X 51MM POS.4,10,13,14,15 & 16           | 6   |
| W701240 | 0F97650108  | BOLT, M8 X 34MM POS.7 & 9                       | 2   |
| W701581 | 0F97650109  | STUD M8 X 68MM X M8 X 2MM POS.2,3,5,6,8,11, &12 | 7   |
| W701712 | 0F97650110  | STUD M6 X 20 M8 X 47.5 POS. 1                   | 1   |
| W701228 | 0F97650111  | DOWEL TIMING COVER TO BLOCK                     | 2   |
|         |             | PLUGS-CYLINDER BLOCK                            |     |
| 6026    | 0F97650112  | 1/2" X 14 MM PIPE, RG & CENTER REAR OF BLOCK    | 2   |
| 6026    | 0F97650113  | 3/4" X 14MM PIPE RH & LH SIDE OF BLOCK          | 2   |
| 6026    | 0F97650114  | 3/8" X 18MM PIPE LH SIDE OF BLOCK               | 1   |
| 6026    | 0F97650115  | 19.35MM CUP LH SIDE OF BLOCK                    | 1   |
| 6026    | 0F97650116  | 1 X 11.5MM PIPE RH & LH CYLINDER HEAD           | 2   |
| 6026    | 0F97650117  | 1/4" X 18 MM PIPE RH & LH CYLINDER HEAD         | 9   |
| 6391    | 0F97650118  | DOWEL TRANY TO BLOCK                            | 2   |
|         |             | OIL PRESSURE SENDING UNIT                       |     |
| 9278    | 0F97650119  | OIL PRESSURE SENDING UNIT                       | 1   |
| 6N071   | 0F97650120  | OIL PRESSURE SENDING UNIT TO BLOCK ADAPTER      | 1   |
|         |             | MAIN BOLTS                                      |     |
| 6345    | 0F97650121  | HOLE # 1,2,3,4 &17                              | 5   |
| 6345    | 0F97650122  | HOLE # 13,14,15,& 16                            | 4   |
| 6345    | 0F97650123  | HOLE # 18,19,20,21,& 22                         | 5   |
| 6345    | 0F97650124  | HOLE #9,10,11 & 12                              | 4   |
| 6345    | 0F97650125  | HOLE #5,6,7,& 8                                 | 4   |
|         |             |   |     |

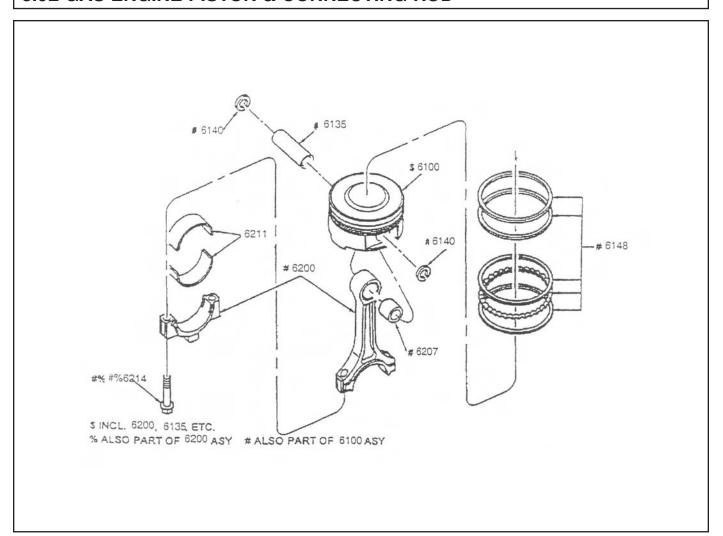
## 3.0L GAS ENGINE CYLINDER HEAD & RELATED PARTS



# 3.0L GAS ENGINE CYLINDER HEAD & RELATED PARTS

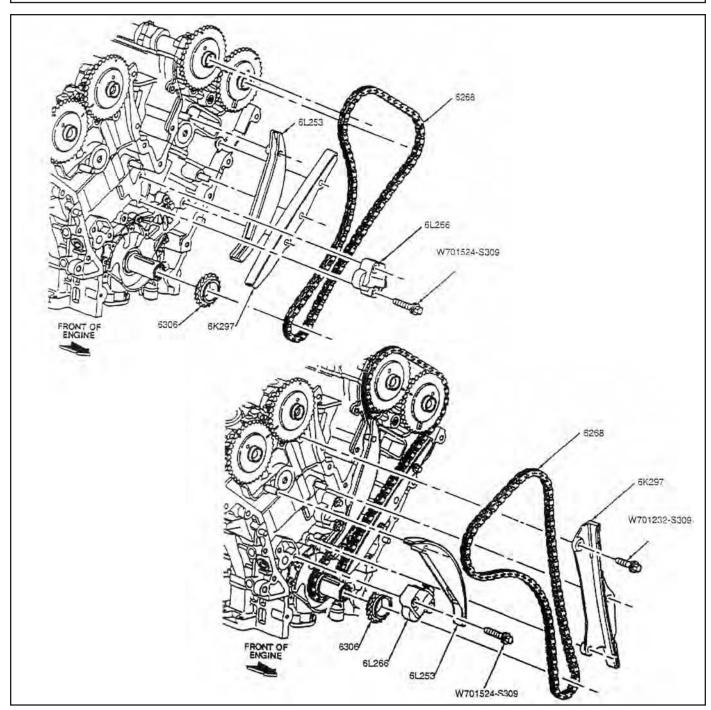
| ITEM    | PART NUMBER | DESCRIPTION                                 | QTY     |
|---------|-------------|---|---------|
|         |             | CYLINDER HEAD ASSEMBLY                      |         |
| 6049    | 0F97650126  | CYL., HEAD, COMPLETE WITH VALVES, LESS CAMS | 1       |
| 6049    | 0F97650127  | CYL., HEAD, COMPLETE WITH VALVES, LESS CAMS | 1       |
| 6051    | 0F97650128  | HEAD GASKET, LH                             | 1       |
| 6051    | 0F97650129  | HEAD GASKET, RH                             | 1       |
| 6065    | 0F97650130  | HEAD BOLT,M10 X 156MM, PKG OF 8             | 16      |
|         |             | VALVES                                      |         |
| 6505    | 0F97650131  | EXHAUST VALVE, STANDARD                     | 6       |
| 6507    | 0F97650132  | INTAKE VALVE, STANDARD                      | 6       |
| 6571    | 0F97650133  | VALVE STEM SEAL, INTAKE                     | 6       |
|         |             | VALVE TRAIN                                 |         |
| 6513    | 0F97650134  | VALVE SPRING                                | 6       |
| 6514    | 0F97650135  | VALVE SPRING RETAINER                       | 12      |
| 6518    | 0F97650136  | VALVE SPRING LOCK KEY                       | 24      |
| 6564    | 0F97650137  | ROCKER ARM                                  | 24      |
| 6C501   | 0F97650138  | LASH ADJUSTER                               | 24      |
| 6L293   | 0F97650139  | CAMSHAFT BEARING CAP BOLT (NOT REPLACED 11- | 97) A/R |
|         |             | CAMSHAFT                                    |         |
| 6250    | 0F97650140  | CAMSHAFT, RH INTAKE                         | 1       |
| 6250    | 0F97650141  | CAMSHAFT, LH INTAKE                         | 1       |
| 6250    | 0F97650142  | CAMSHAFT, RH EXHAUST                        | 1       |
| 6250    | 0F97650143  | CAMSHAFT, LH EXHAUST                        | 1       |
| 6L253   | 0F97650144  | ARM, TINING CHAIN TENSIONER                 | 2       |
|         |             | OIL FILLER / BREATHER / PCV VALVE           |         |
| 6A785   | 0F97650145  | OIL SEPERATOR ASSEMBLY                      | 1       |
| W701504 | 0F97650146  | BOLT, OIL SEPERATOR                         | 1       |
| 6A664   | 0G0607      | CRANKCASE ASPIRATOR HOSE ASSEMBLY           | 1       |
| 6762    | 0F97650147  | ELBOW                                       | 1       |
| 6A666   | 0F97650148  | PCV VALVE                                   | 1       |

## 3.0L GAS ENGINE PISTON & CONNECTING ROD



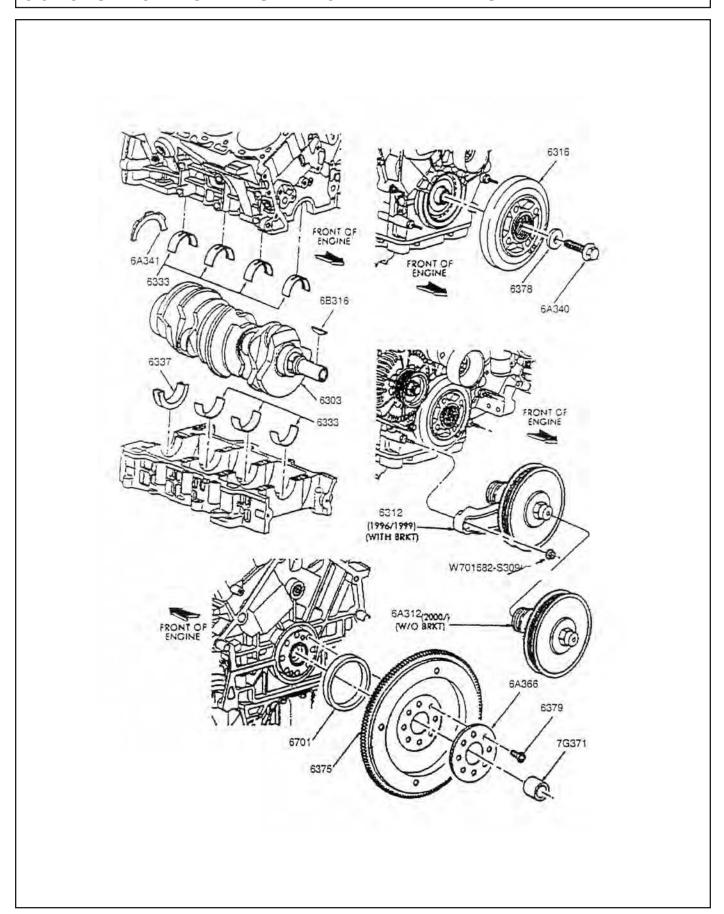
| ITEM | PART NUMBER | DESCRIPTION                                 | QTY  |
|------|-------------|---|------|
|      |             | PISTON & PIN ASSEMBLY                       |      |
| 6100 | 0F97650149  | PISTON, PIN, RINGS & CONNECTING ROD, STANDA | RD 6 |
| 6148 | 0F97650150  | RINGSET, STANDARD                           | 3    |
|      |             | CONNECTING ROD                              |      |
| 6200 | 0F97650151  | CONECTING ROD                               | 6    |
| 6135 | 0F97650152  | PISTON PIN                                  | 6    |
| 6207 | 0F97650153  | BUSHING, PISTON PIN                         | 6    |
| 6140 | 0F97650154  | PISTON PIN RETAINING CLIP                   | 12   |
| 6214 | 0F97650155  | BOLT, ROD                                   | 12   |
|      |             | ROD BEARINGS                                |      |
|      |             | (SOLD IN PACKS OF TWO HALVES)               |      |
| 6211 | 0F97650156  | ROD BEARING, STANDARD, UPPER & LOWER        | 12   |
|      |             |   |      |
|      |             |   |      |
|      |             |   |      |
|      |             |   |      |
|      |             |   |      |

## **3.0L GAS ENGINE TIMING COMPONENTS**



| ITEM    | PART NUMBER | DESCRIPTION                      | QTY |
|---------|-------------|----------------------------------|-----|
| 6268    | 0F97650157  | TIMING CHAIN, RH OR LH           | 2   |
| 6L253   | 0F97650158  | TENSIONER ARM, RH OR LH          | 2   |
| 6K297   | 0F97650159  | TIMING CHAIN GUIDE, RH           | 1   |
| 6K297   | 0F97650160  | TIMING CHAIN GUIDE, LH           | 1   |
| 6L266   | 0F97650161  | TIMING CHAIN TENSIONER, RH OR LH | 2   |
| W701524 | 0F97650162  | BOLT TENSIONER                   | 4   |
| W701232 | 0F97650163  | BOLT, TENSIONER ARM              | 6   |
| 6306    | 0F97650164  | CRANKSHAFT SPROCKET, TWO ROW     | 1   |
|         |             |                                  |     |

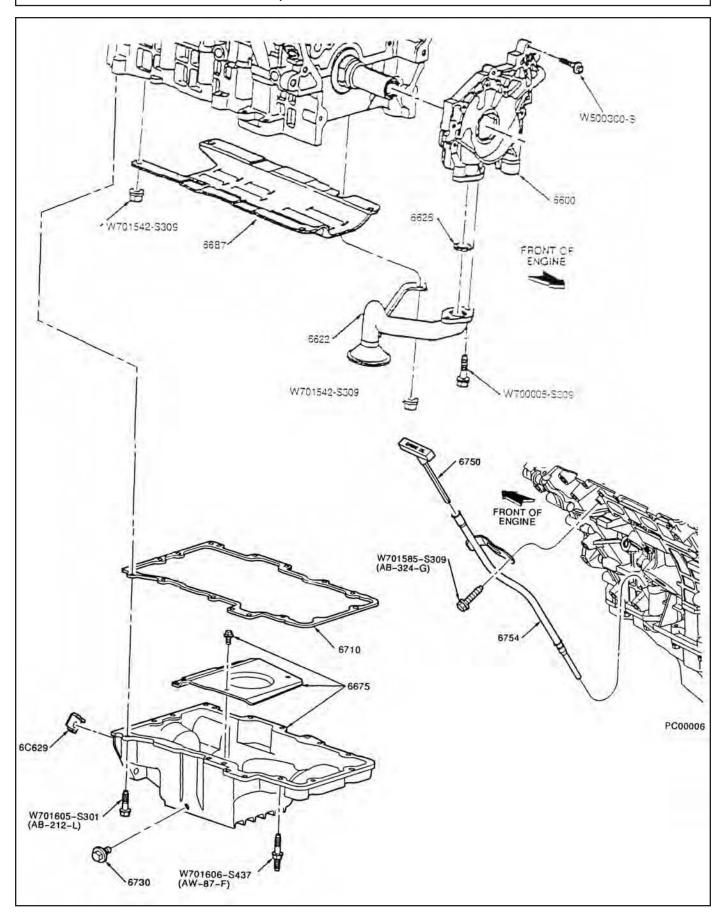
## 3.0L GAS ENGINE CRANKSHAFT & RELATED PARTS



# 3.0L GAS ENGINE CRANKSHAFT & RELATED PARTS

| ITEM   | PART NUMBER | DESCRIPTION                              | QTY |
|--------|-------------|--|-----|
|        |             | CRANKSHAFT ASSEMBLY                      |     |
| 6303   | 0F97650165  | CRANKSHAFT                               | 1   |
| 6B316  | 0F97650166  | CRANKSHAFT KEY                           | 1   |
| 12A227 | 0F97650167  | PULSATOR RING, CRANKSHAFT SENSOR         | 1   |
| 6C315  | 0F97650168  | CRANKSHAFT TIMING SENSOR                 | 1   |
| 12257  | 0F97650169  | BRACKET, IGNITION MOUNTING               | 1   |
| 18801  | 0F97650170  | CAPACITOR                                | 1   |
|        |             | CRANKSHAFT PULLEY                        |     |
| 6316   | 0F97650171  | CRANKSHAFT DAMPER                        | 1   |
| 6A340  | 0F97650172  | BOLT, CRANKSHAFT DAMPER                  | 1   |
| 6378   | 0F97650173  | WASHER, PULLEY TO CRANKSHAFT             | 1   |
| 6A312  | 0F97650174  | PULLEY, CRANKSHAFT                       | 1   |
|        |             | CRANKSHAFT MAIN BEARING KITS             |     |
| 6D309  | 0F97650175  | MAIN BEARING KIT, STANDARD               | 1   |
| 6D309  | 0F97650176  | MAIN BEARING KIT, .010" UNDERSIZE(25MM)  | 1   |
| 6D309  | 0F97650177  | MAIN BEARING KIT, .020" UNDERSIZE (50MM) | 1   |

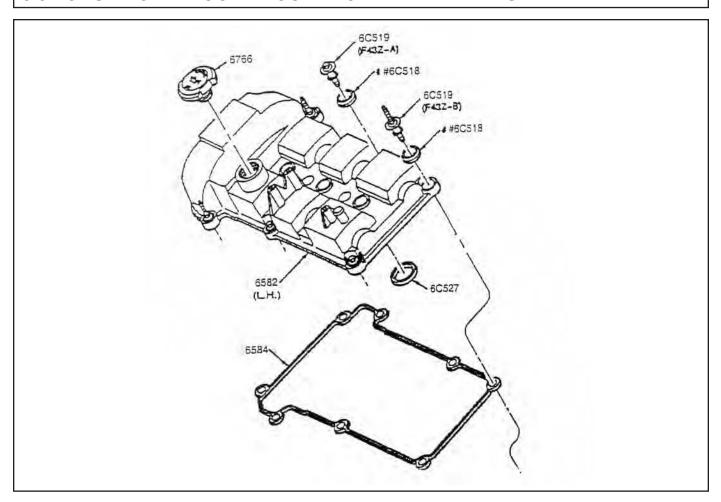
# 3.0L GAS ENGINE OIL PUMP, OIL PAN & RELATED PARTS



# 3.0L GAS ENGINE OIL PUMP, OIL PAN & RELATED PARTS

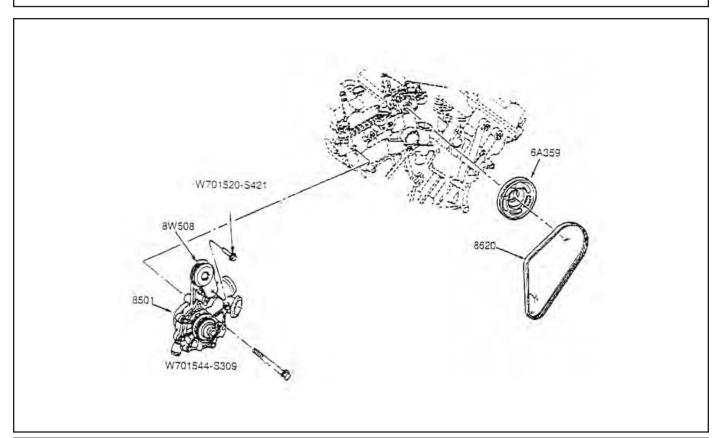
| ITEM    | PART NUMBER | DESCRIPTION                                  | QTY |
|---------|-------------|--|-----|
|         |             | OIL PUMP                                     |     |
| 6600    | 0F97650178  | OIL PUMP ASSEMBLY                            | 1   |
| W500300 | 0F97650179  | BOLT, PUMP TO BLOCK                          | 4   |
| W700005 | 0F97650180  | BOLT, PICK UP TO PUMP                        | 2   |
| 6622    | 0F97650181  | OIL PUMP PICK UP TUBE & SCREEN               | 1   |
| 6626B   | 0F97650182  | OIL PUMP INLET TUBE GASKET                   | 1   |
|         |             | OIL PAN                                      |     |
| 6675    | 0F97650183  | OIL PAN                                      | 1   |
| 6687    | 0F97650184  | BAFFLE, OIL PAN                              | 1   |
| W701542 | 0F97650185  | NUT,M6 X 1MM                                 | 5   |
| 6730    | 0F97650186  | OIL PAN DRAIN PLUG                           | 1   |
| 6734    | 0F97650187  | OIL PAN DRAIN PLUG GASKET                    | 1   |
| 6710    | 0F97650188  | OIL PAN GASKET                               | 1   |
| W701605 | 0F97650189  | BOLT, OIL PAN                                | A/R |
| W701606 | 0F97650190  | STUD OIL PAN                                 | A/R |
| 6754    | 0F97650191  | DIPSTICK TUBE                                | 1   |
| 6750    | 0F97650192  | DIPSTICK                                     | 1   |
| W701585 | 0F97650193  | BOLT, TUBE TO BLOCK                          | 1   |
| 6C629   | 0F97650194  | OIL PAN SPACER, SELECT FIT, YELLOW (#SILVER) | 1   |
| 6C629   | 0F97650195  | OIL PAN SPACER, SELECT FIT, BLUE (#GOLD)     | 1   |
|         |             | OIL FILTER                                   |     |
| 6731    | 0D5419      | OIL FILTER                                   | 1   |

## 3.0L GAS ENGINE ROCKER COVER & RELATED PARTS



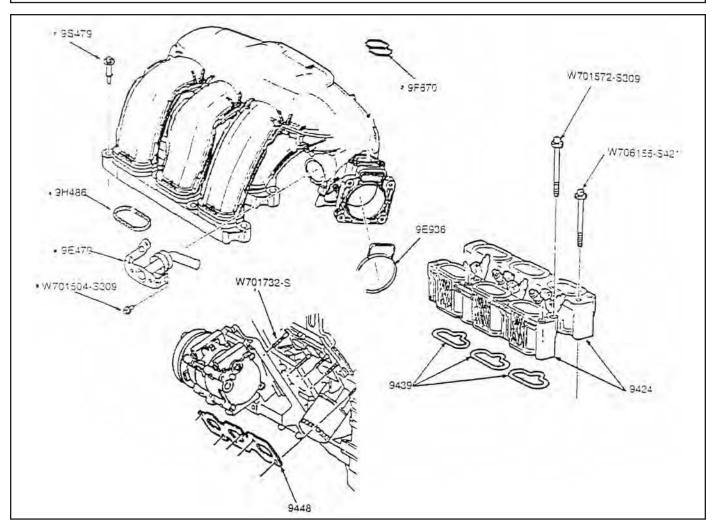
| ITEM  | PART NUMBER | DESCRIPTION             | QTY |
|-------|-------------|-------------------------|-----|
| 6582  | 0F97650196  | ROCKER COVER, RH        | 1   |
| 6582  | 0F97650197  | ROCKER COVER, LH        | 1   |
| 6584  | 0F97650198  | ROCKER COVER GASKET, RH | 1   |
| 6584  | 0F97650199  | ROCKER COVER GASKET, LH | 1   |
| 6C519 | 0F97650200  | STUD & GROMMET          | 1   |
| 6C519 | 0F97650201  | BOLT & GROMMET          | 1   |
| 6766  | 0F97650202  | OIL FILLER CAP          | 1   |
|       |             |                         |     |

# 3.0L GAS ENGINE COOLING SYSTEM



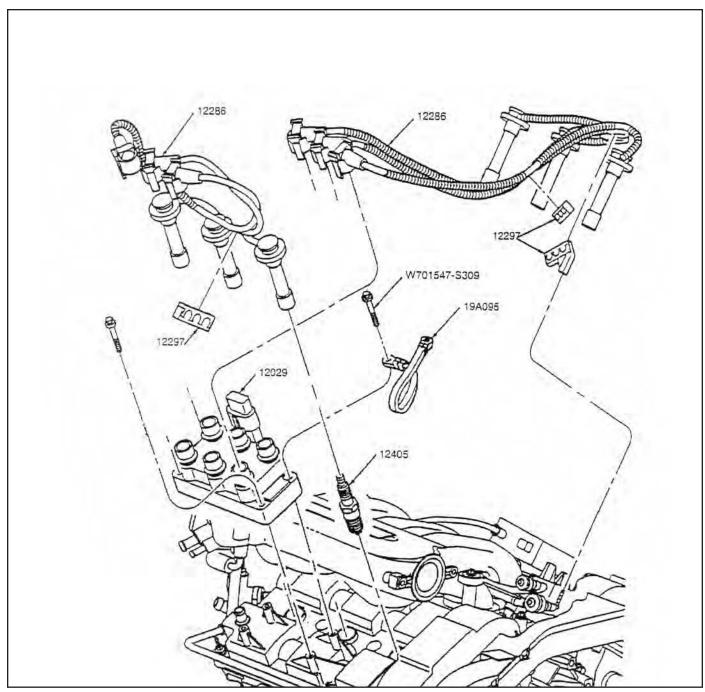
| ITEM  | PART NUMBER | DESCRIPTION                  | QTY |
|-------|-------------|------------------------------|-----|
| 8501  | 0F9225      | WATER PUMP                   | 1   |
| 8A507 | 0F97650203  | WATER PUMP OUTLET CONNECTION | 1   |
| 8508  | 0F97650204  | COVER WATER PUMP             | 1   |
| 8A505 | 0F97650205  | INLET WATER TUBE             | 1   |
| 8555  | 0F97650206  | WATERTUBE, CROSSOVER         | 1   |
| 6A312 | 0F97650207  | ACCESSORY DRIVE PULLEY       | 1   |
| 8620  | 0F9562      | BELT, WATER PUMP             | 1   |
|       |             |                              |     |
|       |             |                              |     |
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## 3.0L GAS ENGINE INTAKE AND EXHAUST MANIFOLD

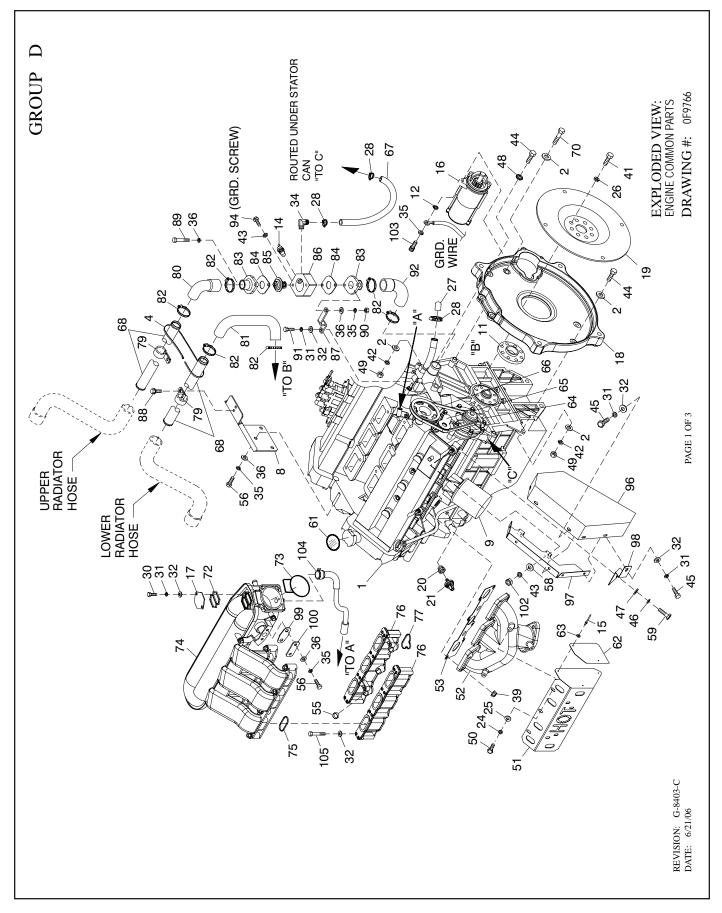


| ITEM    | PART NUMBER | DESCRIPTION                                | QTY |
|---------|-------------|--|-----|
|         |             | INTAKE MANIFOLD                            |     |
| 9424    | 0F9222      | UPPER INTAKE MANIFOLD ASSEMBLY             | 1   |
| 9424    | 0F9221      | LOWER INTAKE MANIFOLD ASSEMBLY             | 2   |
| 9H486   | 0F9224      | GASKETS, UPPER TO LOWER INTAKE MANIFOLD    | 6   |
| 9439    | 0F9223      | GASKETS, LOWER MANIFOLD TO HEAD (PKG OF 6) | 2   |
| 9E470   | 0F97650208  | TUBE ASSY,EGR VALVE OUTLET                 | 1   |
| W701504 | 0F97650209  | BOLT, EGR TUBE TO UPPER INTAKE MANIFOLD    | 2   |
| 9S479   | 0F97650210  | ISOLATOR ASSY, INTAKE MANIFOLD             | 1   |
| 9F593   | 0F97650211  | INJECTOR                                   | 6   |
| 9F792   | 0F97650212  | FUEL RAIL                                  | 1   |
| 9H321   | 0F97650213  | FUEL PRESSURE RELIEF VALVE                 | 1   |
| 9H323   | 0F97650214  | FUEL PRESSURE RELIEF VALVE CAP             | 1   |
| 9F972   | 0F97650215  | FUEL INJECTOR SENSOR                       | 1   |
| W500203 | 0F97650216  | SCREW, SENSOR TO RAIL                      | 2   |
| W701572 | 0F97650217  | BOLT, FUEL RAILTO LOWER INTAKE MANIFOLD    | 4   |
| W708187 | 0F97650218  | BOLT, FUEL RAILTO LOWER INTAKE MANIFOLD    | 4   |
|         |             | EXHAUST MANIFOLD                           |     |
| 9448    | 0G0100      | EXHAUST MANIFOLD GASKET                    | 2   |
| 9E498   | 0F97650219  | CONNECTOR, EMMISSION VACUMN CNTRL          | 1   |
| 9D476   | 0F97650220  | GASKET EGR VALVE                           | 1   |
| 9D477   | 0F97650221  | TUBE, EGR TO EXHAUST MANIFOLD              | 1   |
| W701732 | 0F97650222  | STUD, EXHAUST MANIFOLD TO HEAD             | 12  |
| W701706 | 0F97650223  | NUT, EXHAUST MANIFOLD TO HEAD              | 12  |

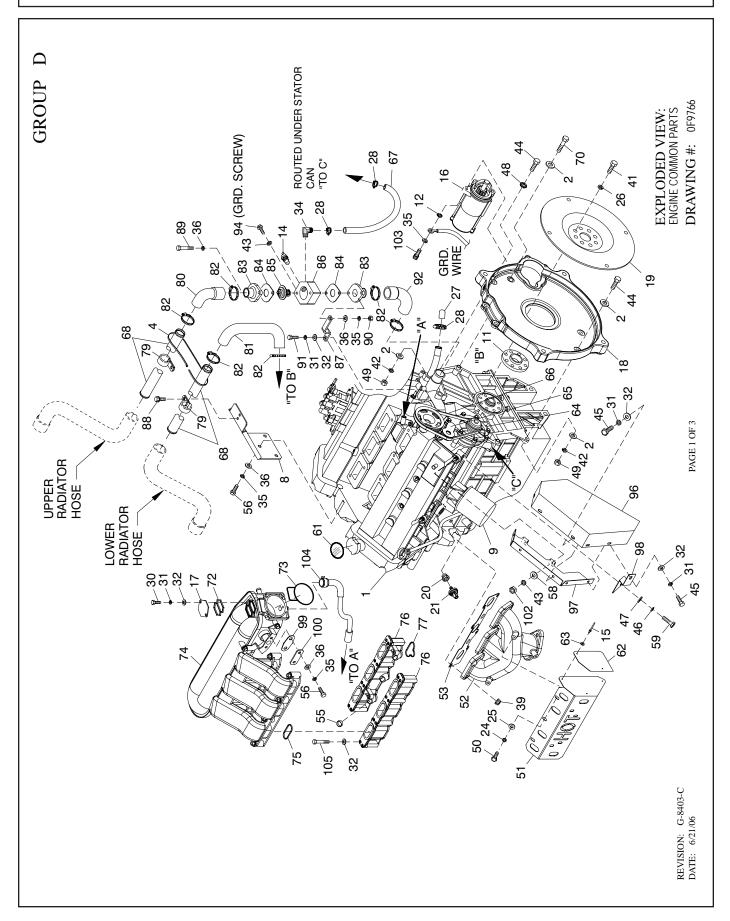
## 3.0L GAS ENGINE IGNITION



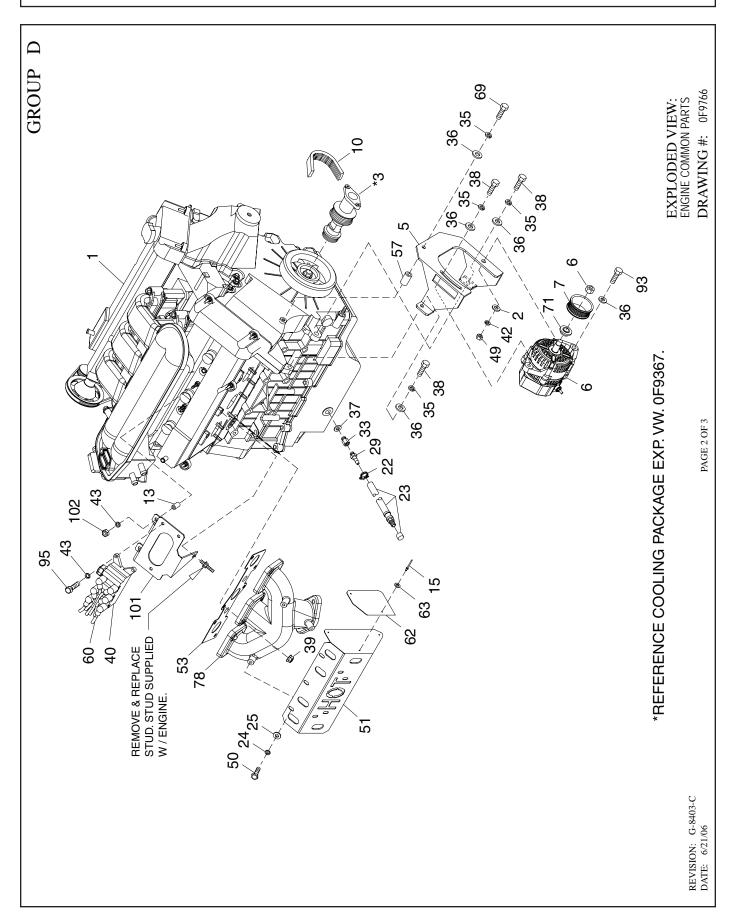
| ITEM    | PART NUMBER | DESCRIPTION                     | QTY |
|---------|-------------|---------------------------------|-----|
| 12029   | 0F9228      | COIL                            | 1   |
| 18801   | 0F97650224  | IGNITION INTERFERENCE CAPACITOR | 1   |
| W701547 | 0F97650225  | BOLT, COIL TO ENG,3/8" 16X.75"  | 4   |
|         | 0F97650226  | SPARK PLUG                      | 6   |
| 12259   | 0F9556      | WIRESET, SPARK PLUGS            | 1   |
| 12297   | 0F97650227  | SEPERATOR, IGNITION WIRE        | 1   |
| 12297   | 0F97650228  | SEPERATOR, IGNITION WIRE        | 1   |
| 12A581  | 0F97650229  | ENGINE CONTROL WIRE HARNESS     | 1   |
| 14536   | 0F97650230  | BRACKET, WIRING                 | 1   |



| ITEM | PART NUMBER      | DESCRIPTION                      | QTY      |
|------|------------------|----------------------------------|----------|
| 1    | 0F9765X          | ENGINE FWD MAKE                  | 1        |
| 2    | 022131           | WASHER FLAT 3/8-M10 ZINC         | 5        |
| 4    | 085662D          | TIE WRAP UL 17.7 X .35 BLK HT    | 1        |
| 8    | 0F9258           | SUPPORT COOLANT TUBE             | 1        |
| 9    | 0D5419           | (REF.) OIL FILTER                | 1        |
| 11   | 0F8931           | SPACER FLEX PLATE                | 1        |
| 12   | 027482           | WASHER SHAKEPROOF EXT 5/16 STL   | 1        |
| 14   | 0A6751           | SWITCH HI-TEMP 245D X 3/8 NPT    | 1        |
| 15   | 033472           | RIVET POP .125 X .400 AL         | 6        |
| 16   | 0E9747           | STARTER 12 VOLT                  | 1        |
| 17   | 0E6585           | COVER IAC ACTUATOR               | 1        |
| 18   | 0F8425           | ADAPTER ENGINE                   | 1        |
| 19   | 0F9965C          | FLEX PLATE 2 POLE                | 1        |
| 20   | 055476           | BSHG RDCR HEX 3/8 TO 1/8 GALV    | 1        |
| 21   | 0A8584           | SWITCH OIL PRESSURE 10 PSI 2 POL | 1        |
| 24   | 083896           | WASHER LOCK 1/4-M6 SS            | 6        |
| 25   | 084929           | WASHER FLAT 1/4 SS               | 6        |
| 26   | 0F3844           | WASHER FLAT .45 X 1.00           | 8        |
| 27   | 077996           | CAP ANTIFREEZE RUBBER            | 1        |
| 28   | 057823           | CLAMP HOSE #10 .56-1.06          | 3        |
| 30   | 047411           | SCREW HHC M6-1.0 X 16 G8.8       | 2        |
| 31   | 022097           | WASHER LOCK M6-1/4               | 8        |
| 32   | 022473           | WASHER FLAT 1/4-M6 ZINC          | 16       |
| 34   | 0G0153           | BARBED EL 90 1/2 NPT X 3/4 HOSE  | 1        |
| 35   | 022129           | WASHER LOCK M8-5/16              | 14       |
| 36   | 022145           | WASHER FLAT 5/16-M8 ZINC         | 14       |
| 39   | 067989           | NUT HEX FL WHIZ M8-1.25          | 12       |
| 41   | 0D5417           | SCREW HHC M10-1.0 X 25 G10.9     | 8        |
| 42   | 046526           | WASHER LOCK M10                  | 3        |
| 43   | 049226           | WASHER LOCK M5                   | 8        |
| 44   | 064416           | SCREW HHC M10-1.5 X 45 G8.8 FT   | 6        |
| 45   | 043116           | SCREW HHC M6-1.0 X 12 G8.8       | 5        |
| 46   | 051769           | WASHER LOCK M12                  | 1        |
| 47   | 049808           | WASHER FLAT M12                  | 1        |
| 48   | 025507           | WASHER SHAKEPROOF EXT 7/16 STL   | 5        |
| 49   | 045772           | NUT HEX M10-1.5 G8 YEL CHR       | 3        |
| 50   | 085296           | SCREW HHC 1/4-20 X 1/2 SS        | 6        |
| 51   | 063230<br>0E7202 | HEAT SHIELD 260 X 80 HOT         | 2        |
| 52   | 0F8795A          | MANIFOLD EXHAUST LH              | 1        |
| 53   | 0G0100           | GASKET EXHAUST                   | 2 (REF.) |
| 55   | 0E0992A          | PLUG EXPANSION 14 OD             | 6        |
| 56   | 039253           | SCREW HHC M8-1.25 X 20 G8.8      | 5        |
| 58   | 051713           | WASHER FLAT M5                   | 2        |
| 59   | 052617           | SCREW HHC M12-1.75 X 20 G8.8     | 1        |
| 60   | 052617<br>0F9556 | WIRES, SPARK PLUG                | 1        |
|      | 01 9000          | WILLO, OF AFTIC F LOC            | ı        |



| ITEM | PART NUMBER | DESCRIPTION                      | QTY      |
|------|-------------|----------------------------------|----------|
| 61   | 0F5114      | DECAL REFER TO OWNERS MANUAL     | 1        |
| 62   | 0F5966      | REFLECTIVE HEAT SHIELD           | 2        |
| 63   | 022985      | WASHER FLAT #6 ZINC              | 6        |
| 64   | 0F9225      | PUMP WATER                       | 1.(REF.) |
| 65   | 0F9227      | TENSIONER WATER PUMP             | 1        |
| 66   | 0F9562      | BELT WATER PUMP                  | 1        |
| 67   | 050968      | HOSE COOL 3/4 ID 20R3 (51.5" LG) | 1        |
| 68   | 0F6746      | TUBE UPPER COOLANT               | 2        |
| 70   | 052243      | SCREW HHC M10-1.5 X 60 G8.8      | 1        |
| 72   | 0F9563      | GASKET IDLE AIR CONTRL ACT CVR   | 1.(REF.) |
| 73   | 0F9564      | GASKET INTAKE ADAPTER            | 1.(REF.) |
| 74   | 0F9222      | MANIFOLD INTAKE UPPER            | 1        |
| 75   | 0F9224      | GASKET INTAKE MANIFOLD UPPER     | 6(REF)   |
| 76   | 0F9221      | MANIFOLD INTAKE LOWER            | 2        |
| 77   | 0F9223      | GASKET INTAKE LOWER              | 6        |
| 79   | 055934V     | CLAMP VINYL 1.5 X .281 Z         | 2        |
| 80   | 0F9220      | HOSE UPPR RAD REAR               | 1        |
| 81   | 0F9239      | HOSE,LOWR RAD REAR               | 1        |
| 82   | 035685      | CLAMP HOSE #28 1.32-2.25         | 6        |
| 83   | 0A2711A     | ADAPTER THERMOSTAT               | 2        |
| 84   | 048665      | GASKET THERMOSTAT                | 2        |
| 85   | 075885      | THERMOSTAT 195 DEG               | 1        |
| 86   | 0F9252      | MACHINING, THERMOSTAT ADPTR      | 1        |
| 87   | 0F9259      | BRACKET,THERMOSTAT               | 1        |
| 88   | 0C2454      | SCREW THF M6-1X16 N WA Z/JS      | 2        |
| 89   | 052207      | SCREW HHC M8-1.25 X 80 G8.8      | 2        |
| 92   | 0F9232      | HOSE UPPR RAD REAR               | 1        |
| 96   | 0F9271      | GUARD WATER PUMP REAR            | 1        |
| 97   | 0F9270      | GUARD WATER PUMP FRNT            | 1        |
| 98   | 0F9314      | BRKT WATERPUMP GUARD             | 1        |
| 99   | 0F7695      | EGR GASKET                       | 1        |
| 100  | 0F6658      | COVER EGR                        | 1        |
| 102  | 051716      | NUT HEX M5-0.8 G8 CLEAR ZINC     | 4        |
| 103  | 049821      | SCREW SHC M8-1.25 X 30 G12.9     |          |
| 104  | 0G0607      | ASSEMBLY HOSE PCV VALVE          | 3        |



| ITEM | PART NUMBER | DESCRIPTION                  | QTY      |
|------|-------------|------------------------------|----------|
| 1    | 0F9765X     | ENGINE FWD MAKE              | 1        |
| 2    | 022131      | WASHER FLAT 3/8-M10 ZINC     | 5        |
| 3*   | 0F8046      | ADAPTER CRANKSHAFT           | (REF.)   |
| 5    | 0F9625      | BRACKET DC ALTERNATOR        | 1        |
| 6    | 0E9868A     | ALTERNATOR DC W/OUT PULLEY   | 1        |
| 7    | 0F3216      | PULLEY 80 OD DC ALTERNATOR   | 1        |
| 10   | 0D3488N     | BELT SERPENTINE 28.92"       | 1        |
| 13   | 029187      | SPACER .19 X .31 X .50 PL    | 2        |
| 15   | 033472      | RIVET POP .125 X .400 AL     | 6        |
| 22   | 0C7649      | CLAMP HOSE .3887             | 1        |
| 23   | 069860E     | HOSE DRAIN ASSY 28"          | 1        |
| 24   | 083896      | WASHER LOCK 1/4-M6 SS        | 6        |
| 25   | 084929      | WASHER FLAT 1/4 SS           | 6        |
| 29   | 055596      | BARBED STR 3/8 NPT X 3/8     | 1        |
| 33   | 077456      | ADAPTER M12-1.75 X 3/8 NPT   | 1        |
| 35   | 022129      | WASHER LOCK M8-5/16          | 14       |
| 36   | 022145      | WASHER FLAT 5/16-M8 ZINC     | 14       |
| 37   | 052677      | WASHER NYLON .50 X .87 X .06 | 1        |
| 38   | 043107      | SCREW HHC M8-1.25 X 25 G8.8  | 3        |
| 39   | 067989      | NUT HEX FL WHIZ M8-1.25      | 12       |
| 40   | 0F9228      | COIL IGNITION                | 1        |
| 42   | 046526      | WASHER LOCK M10              | 3        |
| 43   | 049226      | WASHER LOCK M5               | 8        |
| 49   | 045772      | NUT HEX M10-1.5 G8 YEL CHR   | 3        |
| 50   | 085296      | SCREW HHC 1/4-20 X 1/2 SS    | 6        |
| 51   | 0E7202      | HEAT SHIELD 260 X 80 HOT     | 2        |
| 53   | 0G0100      | GASKET EXHAUST               | 2 (REF.) |
| 57   | 0F9617      | SPACER ALTERNATOR            | 1        |
| 60   | 0F9556      | WIRES, SPARK PLUG            | 1        |
| 62   | 0F5966      | REFLECTIVE HEAT SHIELD       | 2        |
| 63   | 022985      | WASHER FLAT #6 ZINC          | 6        |
| 69   | 051731      | SCREW HHC M8-1.25 X 50 G8.8  | 1        |
| 93   | 057645      | SCREW HHC M10-1.5 X 50 G8.8  | 1        |
| 95   | 055440      | SCREW HHC M5-0.8 X 25 G8.8   | 3        |
| 101  | 0F9498      | BRACKET COIL                 | 1        |
| 102  | 051716      | NUT HEX M5-0.8 G8 CLEAR ZINC | 4        |

