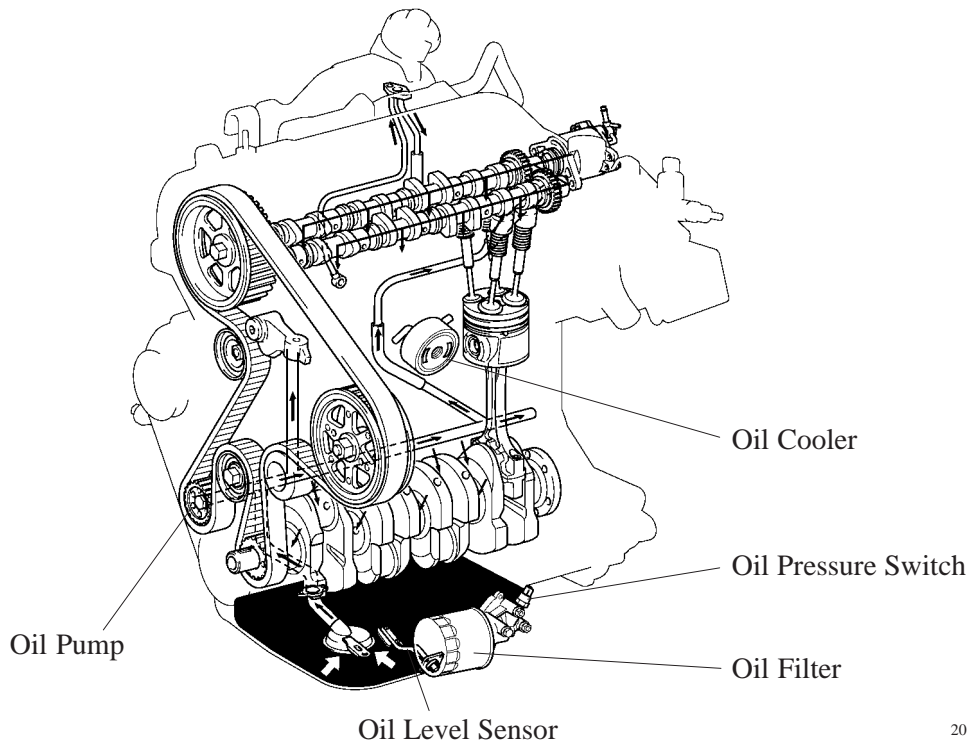


## ■ LUBRICATION SYSTEM

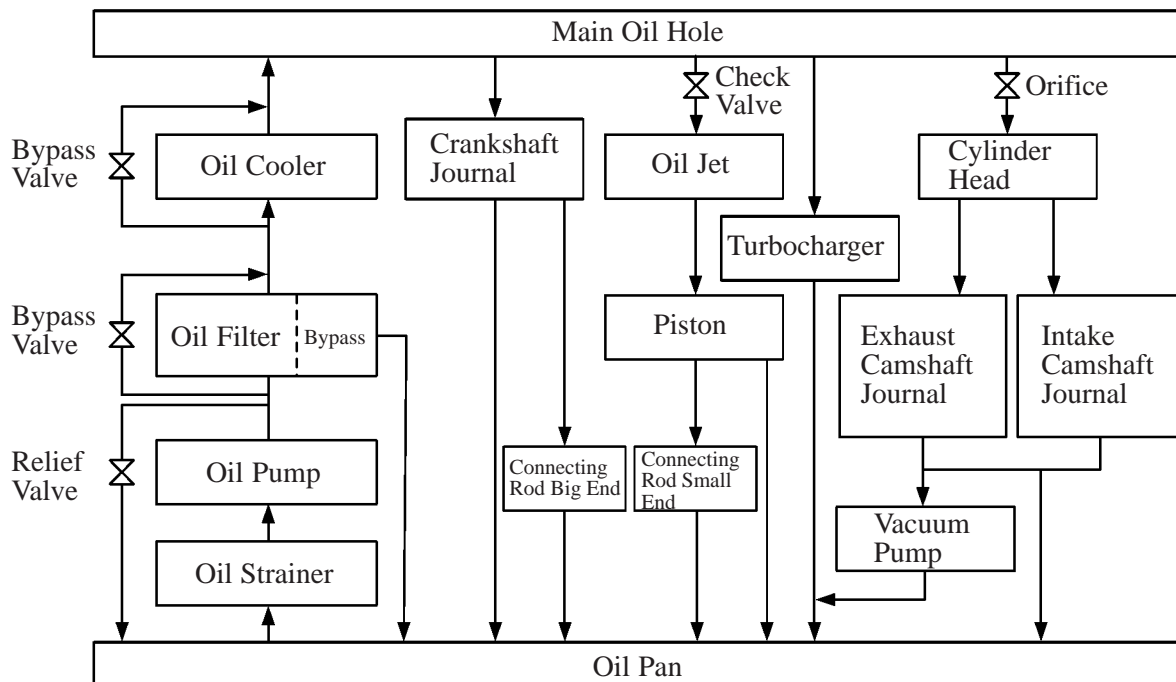
- The lubrication circuit is fully pressurized and all oil passes through an oil filter.
- A trochoid gear type oil pump is driven by the timing belt.
- The water-cooled type engine oil cooler is used to lower the oil temperature.
- Oil jets have been provided for cooling the pistons.
- An oil level sensor is provided in the oil pan for efficient servicing.

### — Change (from Avensis) —

In conjunction with the application of this engine on the Avensis Verso/Picnic, the oil filter has been relocated in order to ensure serviceability. Accordingly, the oil catch plate has been discontinued.



206EG30



201EG31

## ► Specification ◀

|              |                               |  |   |
|--------------|-------------------------------|--|---|
| Oil Capacity | Dry                           | 6.7 liters (7.1 US qts, 5.9 Imp. qts)            |   |
|              | with Oil Filter               | 5.9 liters (6.2 US qts, 5.2 Imp. qts)            |   |
|              | without Oil Filter            | 5.3 liters (5.6 US qts, 4.7 Imp. qts)            |   |
| Oil Pump     | Type                          | Trochoid Gear                                    |   |
|              | Pump Speed                    | 990-1010 rpm                                     | 4455-4545 rpm                                   |
|              | Discharge Volume              | 10.0 l/min or more                               | 67.8 l/min or                                   |
|              | Discharge Pressure            | 200 kPa<br>(2.0 kgf/cm <sup>2</sup> , 29 psi)    | 290 kPa<br>(3.0 kgf/cm <sup>2</sup> , 43 psi)   |
|              | Relief Valve Opening Pressure | —  | 590 kPa<br>(6.0 kgf/cm <sup>2</sup> , 85.3 psi) |
| Oil Filter   | Type                          | Full-flow + Bypass                               |   |
|              | Oil Capacity                  | Approx. 0.61 liters (0.64 Us qts, 0.54 Imp. qts) |   |
|              | Bypass Valve Opening Pressure | 80 – 120 kPa<br>(0.8 – 1.2 kgf/cm <sup>2</sup> ) |   |