

## **Scope of Work for Overhauls**

### **1a) Top Overhaul of Engine (All vehicles)**

- 1) Replacement of cylinder head gasket
- 2) Replacement of valve seal, if necessary
- 3) De-carbonization of cylinder head and piston head
- 4) Lapped valve seat, if necessary

### **1b) Overhaul of Engine (All vehicles)**

- 1) Include labour charges and parts costs
- 2) Exclude the replacement of crankshaft, engine block and cylinder head

### **2 Overhaul of Clutch (Vans, Buses, Trucks, & Fuel Tankers)**

- 1) Removal and re-installation of gearbox and linkages
- 2) Removal and re-installation of clutch assembly
- 3) Replacement of clutch thrust and flywheel spigot bearing

### **Mandatory Parts Replacements**

- 1) Clutch pressure plate
- 2) Clutch lining
- 3) Clutch thrust bearing
- 4) Flywheel spigot bearing

### **3 Overhaul of Brakes (All vehicles)**

- 1) Removal, overhaul and re-installation of brake master pump
- 2) Removal, overhaul and re-installation of brake wheel cylinder
- 3) Removal of brake flexible hydraulic for distortion
- 4) Checking of brake drum and disc for flatness
- 5) Checking of rigid brake pipe for leakage
- 6) Checking the thickness of brake linings and pads
- 7) Conduct functional test on brake booster
- 8) Conduct both functional and operational tests upon completion

### **Parts Replacements**

- 1) Master pump repair kit (mandatory)
- 2) Wheel cylinder repair kit (mandatory)
- 3) Brake flexible hydraulic hose ( if necessary)
- 4) Brake linings and pads (mandatory)
- 5) Brake drum or disc (if necessary)
- 6) Skimming of brake drum or disc (perform where necessary)
- 7) Relay valve (Air/Hydraulic) (replace if necessary)

**Over and Above Parts Replacements (Chargeable when replaced)**

- 1) Brake booster
- 2) Brake master pump assembly
- 3) Wheel cylinders assembly

**4a Manual Transmission (Vans, Buses, Trucks & Fuel Tankers)**

- 1) Removal, overhaul and re-installation of transmission assembly
- 2) Replacement of synchronizer assembly
- 3) Checking of gears for wear limits
- 4) Replacement of all oil seals and gasket
- 5) Checking bearings for wear

**Parts Replacements**

- 1) Oil seals and gasket (mandatory)
- 2) Synchronizer assembly (mandatory)
- 3) Various gear sets (if necessary)
- 4) Bearings (mandatory)
- 5) Spacer (mandatory)

**4b Automatic Transmission & Automated Manual Transmission (Smoother) ( Vans, Fuel Tankers, Passenger Buses)**

- 1) Removal, overhaul and re-installation of transmission assembly
- 2) Replacement of clutch disc pad
- 3) Checking gears for wear limits
- 4) Replacement of all oil seals and gasket
- 5) Checking of various bearings for wear
- 6) Checking control modules for operation
- 7) Checking of all sensors. (Gearshift position, gear select position, vehicle speed, turbine speed & input shaft speed).
- 8) Checking of all solenoid valves.
- 9) Checking gearshift control box.
- 10) Service all solenoid valves

**Parts Replacements**

- 1) Oil seals and gasket (mandatory)
- 2) Clutch disc pad (mandatory)
- 3) Spool valve and control unit (mandatory)
- 4) Oil pump (mandatory)
- 5) Gear set (if necessary)

**Over and Above parts replacements (Chargeable when replaced)**

- 1) Torque converter.
- 2) Casing (replacement to be decided in cases of minor cracks)

**Turn round time for complete overhaul (to be committed by contractor)**

	<u>Vans &amp; Cars</u> <u>In Hours or Days</u>	<u>Buses, Trucks</u> <u>In Hours or Days</u>
1) Complete engine overhaul		
2) Clutch overhaul		
3) Brake overhaul		
4) Auto transmission overhaul		
5) Manual transmission overhaul		
6) Axle overhaul		
7) Automated Manual Transmission		

Note: All major overhaul works are to be carried out outside SMC.  
All Commercial Vehicle has to be tow out for out-house overhaul repair.