



Model	Date	Area	1
456M - 550 Maranello / Barchetta	November 2001	Progressive No.	954

**SUBJECT: INTAKE (PART NUMBER 188630) AND EXHAUST (PART NUMBER 188631)
VALVE GUIDES IN SINTERED STEEL**

Please be advised that, two new adapters have been designed for installing the new sintered steel valve guides during overhauling.

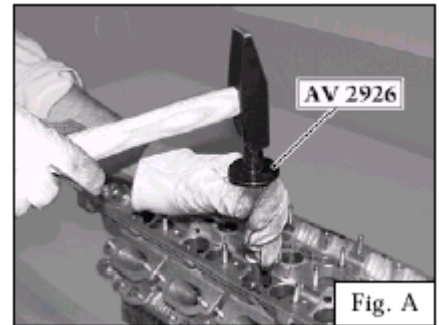
The adapters identification numbers are as follows:

- **AV 3345** for **550 Maranello and Barchetta**
- **AV 3346** for **456M GT/GTA**

Both adapters must be used with the tool **AS 102178**, which you may already have available in your workshop.

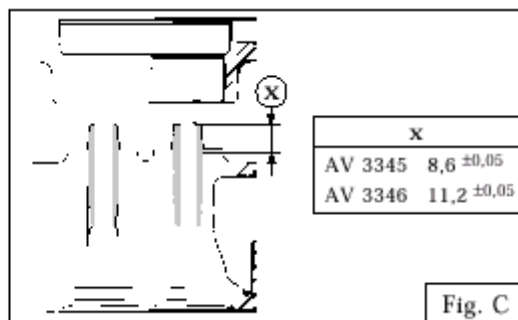
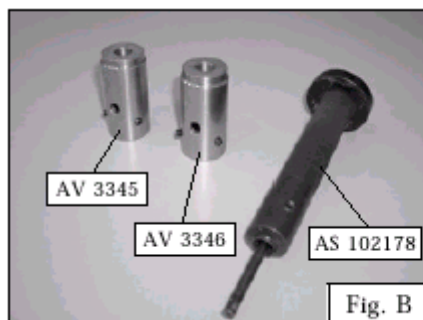
Removal of the bronze valve guides

- Using a **10 mm** diameter miller with **7 mm** diameter shank (supplied with tool **AV 2926**), mill the guide on the seal ring side about **25 mm** from the end. Be sure to lubricate the miller to prevent it from breaking and be sure to keep it aligned with the valve guide;
- In order to make the removal of the valve guide easier and to avoid the transfer of material from the cylinder head, heat the cylinder head at **100°C** for 30 minutes before the removal.
- Remove the valve guide using the punch supplied with tool **AV 2926** (Fig. A).



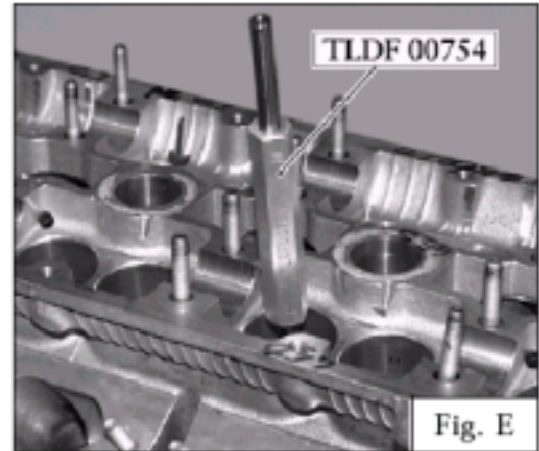
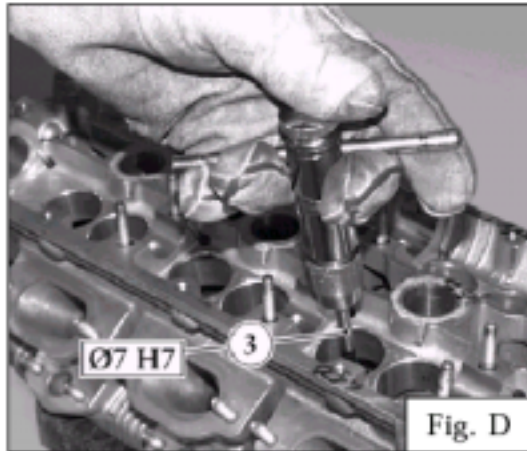
Installing the sintered steel valve guides

- In order to install the new valve guides, the cylinder head must be heated at **100°C** for about 1 hour and the valve guides cooled with liquid nitrogen;
- To install the valve guide, use the special tool **AS 102178** (part number **95972178**) with the adapter **AV 3345** or **AV 3346** (Fig. B);
- Lubricate the valve guide with grease;
- Proceed with the installation of the valve guide until the adapter is flush with the head. The new valve guides protrusion is determined by the inside diameter of the adapter (Fig. C);





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- Dry ream the valve guides using a **7 mm H7** reamer fitted inside the special spindle. Before carrying out this operation be sure the bore cutters are sharp (Fig. **D**);
- Using the gauge **TLDF 00754** (Fig. E), insert the "**P**" side of the gauge to check the valve guide for proper size.
- When installing the new sintered steel valve guides, it is necessary to also use the new spring seat, part number **183779** (old part number **167378**), for the 550 Maranello and Barchetta, and new spring seat, part number **176189** (old part number **140604**) for the 456M.
- It is also necessary to install the new valve seals, part number **145785**.

NOTE: The new adapters **AV 3345** and **AV 3346** must be ordered from our Parts Department as needed. Before ordering, make sure that you have the tool **AS 102478**.