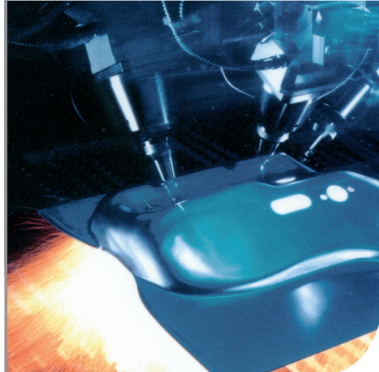


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|                      |                                 | Melted edges upper side (edges are generally rounded a little) | Melted edges lower side (edges are generally rounded a little) | Concave cut surface near upper side | Concave cut surface near lower side | Cut kerf opening towards upper side | Cut kerf opening towards lower side | Uneven cut surface            | Dross formation               | Excessive depth of drag lines | Cratering                     | Unfinished cut                | Excessive drag line formation | Oxide layer/discoloration     | Interrupted cut               |                               |
|----------------------|---------------------------------|--|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|                      |                                 | O <sub>2</sub> N <sub>2</sub>                                  | O <sub>2</sub> N <sub>2</sub>                                  | O <sub>2</sub> N <sub>2</sub>       | O <sub>2</sub> N <sub>2</sub>       | O <sub>2</sub> N <sub>2</sub>       | O <sub>2</sub> N <sub>2</sub>       | O <sub>2</sub> N <sub>2</sub> | O <sub>2</sub> N <sub>2</sub> | O <sub>2</sub> N <sub>2</sub> | O <sub>2</sub> N <sub>2</sub> | O <sub>2</sub> N <sub>2</sub> | O <sub>2</sub> N <sub>2</sub> | O <sub>2</sub> N <sub>2</sub> | O <sub>2</sub> N <sub>2</sub> | O <sub>2</sub> N <sub>2</sub> |
| <b>LASER BEAM</b>    | incorrect focus position        | •  | •  |                                     | •                                   |                                     |                                     | •                             | •                             | •                             | •                             |                               |                               |                               |                               | •                             |
|                      | laser power too high            |  | •  | •                                   |                                     |                                     |                                     |                               |                               |                               |                               |                               |                               |                               |                               |                               |
|                      | laser power too low             |  |  |                                     |                                     |                                     |                                     |                               |                               |                               |                               |                               |                               | •                             | •                             | •                             |
|                      | laser power fluttering          |  |  |                                     |                                     |                                     |                                     |                               |                               | •                             | •                             | •                             | •                             | •                             | •                             | •                             |
|                      | energy per unit length too high | •  | •  |                                     |                                     |                                     |                                     |                               | •                             | •                             | •                             | •                             | •                             |                               |                               |                               |
|                      | energy per unit length too low  |  |  |                                     |                                     |                                     |                                     |                               | •                             | •                             | •                             | •                             |                               |                               |                               |                               |
|                      | off-centred laser beam          |  |  |                                     | •                                   |                                     |                                     |                               |                               |                               |                               |                               |                               |                               |                               |                               |
| <b>CUTTING SPEED</b> | speed too high                  |  | •  |                                     |                                     |                                     | •                                   |                               | •                             | •                             | •                             | •                             | •                             | •                             | •                             | •                             |
|                      | speed too low                   |  |  |                                     |                                     |                                     |                                     |                               | •                             | •                             | •                             | •                             |                               |                               |                               | •                             |
| <b>CUTTING GAS</b>   | cutting gas pressure too high   |  |  |                                     | •                                   |                                     | •                                   |                               | •                             | •                             | •                             |                               |                               |                               |                               |                               |
|                      | cutting gas pressure too low    |  | •  |                                     |                                     |                                     |                                     |                               | •                             | •                             | •                             | •                             | •                             | •                             |                               |                               |
|                      | incorrect gas or gas purity     |  |  |                                     |                                     |                                     |                                     |                               | •                             |                               |                               | •                             | •                             |                               | •                             |                               |
|                      | cutting gas pressure fluttering |  |  |                                     |                                     |                                     |                                     |                               |                               |                               | •                             | •                             |                               |                               |                               | •                             |
|                      | off-centred cutting gas jet     |  |  |                                     | •                                   |                                     | •                                   |                               | •                             | •                             |                               |                               |                               |                               |                               | •                             |
| <b>NOZZLE</b>        | nozzle damaged or dirty         |  |  | •                                   | •                                   | •                                   | •                                   | •                             | •                             |                               |                               | •                             |                               |                               |                               | •                             |
|                      | working distance too large      |  |  |                                     |                                     |                                     |                                     |                               | •                             |                               |                               |                               |                               |                               |                               | •                             |
|                      | nozzle too small                |  |  |                                     |                                     |                                     |                                     |                               | •                             | •                             |                               | •                             | •                             |                               |                               | •                             |
| <b>LENS</b>          | lens damaged (focus shift)      |  |  |                                     | •                                   | •                                   |                                     | •                             |                               |                               |                               |                               |                               |                               |                               | •                             |
|                      | false lens (focal distance)     |  |  |                                     |                                     |                                     |                                     |                               |                               | •                             |                               |                               |                               |                               |                               | •                             |
| <b>MATERIAL</b>      | material or surface flaws       |  |  |                                     |                                     |                                     |                                     |                               | •                             | •                             | •                             | •                             |                               | •                             |                               | •                             |
| <b>PROCESS</b>       | process temperature too high    | •  | •  |                                     |                                     |                                     |                                     |                               |                               |                               |                               |                               |                               |                               |                               |                               |
|                      | imprecise parameter settings    |  | •  |                                     |                                     |                                     |                                     |                               |                               |                               |                               |                               |                               |                               |                               |                               |

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