

HW#7 Internal Combustion Engines

1) Design a tuned 2-stroke exhaust system for a single cylinder racing engine. Assume the following:

Exhaust Temp = 550°K

Engine Speed = 12,000 rpm

EPO = 90°ATDC

XPO = 120°ATDC

Give the distance to the expansions/contractions and sketch the exhaust pipe.

2) What are the typical bulk flow patterns in SI engines?

3) What are the 2 major ways turbulence is induced in Diesel engines?