

# Heavy Mechanical Trades (2024)

## Common Core Level 2

### ACRONYMS AND ABBREVIATIONS

TERM	MEANING
A	Ampere
AC	Alternating current
ACR	Amplified common rail
AFRC	Air-fuel ratio control
ATDC	After top dead centre
BDC	Bottom dead centre
BTDC	Before top dead centre
CAC	Charge air cooler
CAN	Controlled area network
CNG	Compressed natural gas
DC	Direct current
DEF	Diesel exhaust fluid
DOC	Diesel oxidation catalyst
DPF	Diesel particulate filter
ECM	Electronic control module
EGR	Exhaust gas recirculation
EP	Extreme pressure
EUI	Electronic unit injector
EUP	Electronic unit pump
HC	Hydrocarbon
HEUI	Hydraulically activated, electronically controlled, unit injector
HPCR	High pressure common rail
HPI-TP	High pressure injection – timed pressure

TERM	MEANING
kPa	kilopascal
LED	Light emitting diode
LPG	Liquefied petroleum gas
LSD	Low sulfur diesel
NO <sub>x</sub>	Nitrogen oxides
OEM	Original equipment manufacturer
ppm	Parts per million
PWM	Pulse-width modulation
SCR	Selective catalytic reduction
TDC	Top dead centre
TPS	Throttle position sensor
ULSD	Ultra-low sulfur diesel
V	Volt
VGT	Variable geometry turbo
VREF	Voltage reference

**NOTE** Do not bring this document to your exam.  
These acronyms and abbreviations will be included in the exam reference materials.

## FORMULAS

$$\text{Area} = \pi (\text{Radius}^2)$$

$$A = \pi r^2$$

$$\text{Volume} = \text{Area} \times \text{Length}$$

$$V = A \times L$$

$$\text{Compression Ratio} = \frac{\text{Total Volume}}{\text{clearance Volume}}$$

$$CR = \frac{TV}{CV}$$

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