BI FUEL?

DIESEL + NG, LNG, CNG, WELLHEAD GAS?
THINGS TO THINK ABOUT

– MAINTAIN DIESEL ENGINE PERFORMANCE
  • START UP 100% DIESEL FAST START
  • BLOCK LOAD UP & DOWN
  • HIGH DEMAND FLUCTUATING LOADS
  • HIGH DEMAND STEP LOADS
  • HOURS OF RUNTIME
  • EXTEND FUEL CAPACITY
THINGS TO THINK ABOUT

• SELECTION OF THE TYPE OF GAS
  – NATURAL GAS UTILITY SUPPLIED 1:1
  – LNG 1.6 GALLONS = 1 GALLON OF DIESEL
  – CNG 1.4 GALLONS = 1 GALLON OF DIESEL
  – WELL HEAD GAS ? = 1 GALLON OF DIESEL
EXPECTATIONS

- REDUCTION IN DIESEL FUEL USAGE & COST UP TO 70%*
- EXTENDED RUNTIME
- NO CHANGE IN DIESEL ENGINE AND GENERATOR PERFORMANCE
- NO INTERFACE OR TAMPERING WITH OEM CONTROLS
- NO ENGINE MODIFICATION
- WILL NOT EFFECT THE ENGINE WARRANTY
- CO EMISSIONS WILL GO UP AND CAN BE BROUGHT BACK INTO COMPLIANCE WITH DOC

*DEPENDENT ON LOAD, GAS QUALITY, ENGINE COOLING etc..
THINGS ABOUT A BI FUEL ENGINE

- ENGINE PROTECTION
  - INDEPENDENT BI FUEL CONTROL PANEL-ECU
  - GAS INLET PSI AND GAS OUTLET PSI
  - EXHAUST TEMPERATURE
  - GAS DETECTION
  - FLAME DETECTION
  - ENGINE/GENERATOR LOAD DEMAND CONTROL OF GAS
  - VIBRATION SENSING
  - MANIFOLD AIR TEMPERATURE
THINGS ABOUT A BI FUEL ENGINE

• GAS CONTROL
  – BEST RESULTS IS CLOSE TO INLET OF TURBOCHARGER
  – GAS DELIVERY-UNDER 7 PSI
  – GAS LEL DETECTION
  – FLAME DETECTION
  – VIBRATION (KNOCK)
WHO NEEDS BI FUEL?

• CUSTOMERS WHO NEED THE EXTENDED RUNTIME DUE TO EMERGENCIES
  – HOSPITALS
  – DATA CENTERS
  – CANCER TREATMENT FACILITIES
  – RESORTS
  – OFFICE BUILDINGS
  – CONDOMINIUMS
  – MALLS
  – POLICE DEPARTMENT
  – FIRE DEPARTMENTS
WHO NEEDS BI FUEL?

• INDUSTRIAL CUSTOMERS
  – DRILLING OIL & GAS
  – FRACKING
  – IRRIGATION
  – LARGE & SMALL MANUFACTURING
  – OTHERS
BI FUEL IS A GROWING TREND

- MOST ALL 4 CYCLE TURBOCHARGED ENGINES ARE ABLE TO BE BI FUELED
- DOES IT FIT ALL SCENARIOS?

- THAT IS A CUSTOMER DECISION
BI FUEL IS TRENDING AND GROWING

THANK YOU

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