

- SP 157 **ENGINE NOISE SYMPOSIUM** - Consists of 11 papers presented in 1958 on engine combustion chamber noises, especially rumble in high compression ratio engines.
4.50 Mem. 7.00 List
- SP 193 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Complete set of the series as shown below.
25.00 Mem. 45.00 List
- * SP 335 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part 16 - Includes papers on computer time sharing and engine design, air pollution from automotive exhaust, automobiles and air pollution, instrumentation, and fuel injection for high speed diesel engines.
3.50 Mem. 7.00 List
- SP 292 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part 15 - Computer aided Engine Design (670523) by Gary L. Borman, Univ. of Wisconsin, Heat Rejection and Cooling Requirements of Internal Combustion Engines (670524) by Robert Cramer, Jr., Murphy Diesel Co., Engine Cooling Radiators (670525) by James D. Morse, Modine Manufacturing Co., Small Internal Combustion Engine Design Cooling and Associated Parameters, Heat Rejection Methods (670526) by R. E. Perlewitz, Lon Mooney, and William Kalweit, Tecumseh Products Co., and Solid State Ignition (670527) by Arthur G. Hufton, Motorola, Inc.
3.50 Mem. 7.00 List
- SP 283 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part 14 - Covers fundamentals of valve design and material selection, crankshaft design, turbochargers, piston design, and how to design bushings and thrust bearings for engine applications.
3.50 Mem. 7.00 List
- SP 271 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part 13 - Covers surface ignition and rumble, piston ring shape, gas engine valve and seat wear, basic concepts involved in using digital computers for solving engineering problems, and a specific example of how a computer is used to solve a heat conduction problem. (1965)
3.50 Mem. 7.00 List
- SP 256 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part 12 - Covers performance of a digital engine, engine wear, crankshaft testing in the laboratory, and the development of lubricating oils for small 2-cycle engines.
3.00 Mem. 4.50 List
- SP 243 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part II - (1963) - Covered are pumpless injection systems; hybrid engines; design, development, and application of the 17.6 engine; power producing characteristics of diesel engines.
3.50 Mem. 7.00 List

- SP 237 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part 10 - (1962) Covered are lube oil refining, specifications and tests; piezoelectric ignition system; deterioration of engine oils; and contemporary ignition systems.
3.50 Mem. 7.00 List
- SP 192 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part 9 - (1961) - Discussed are small engine hydraulic governor design and application, a guide to disc clutch design and application, hydrostatic transmissions for vehicle propulsion, performance and structure of mechanical transmissions, and the selection of converters. 3.50 Mem. 7.00 List
- SP 178 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part 8 - (1960) - Discussed in this part are evaluating valve train dynamics, dynamometers for engine testing, radio-isotopes, instrumentation for engine testing, and field testing diesel engines.
3.50 Mem. 7.00 List
- SP 143 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part 4 - (1956) - Discussed are gear design and manufacture, supercharging, development of small engines, automotive gasoline injection, and diesel fuel injection
3.50 Mem. 7.00 List
- SP 137 **ENGINEERING KNOW-HOW IN ENGINE DESIGN** - Part 3 - (1955) - Information on materials in engine design, reciprocating engine dynamics, applying gasoline and diesel fuels, light two-cycle engines, the outboard motor, and design features of an opposer piston diesel.
3.50 Mem. 7.00 List

FUELS AND LUBRICANTS

- * SP 340 **FUEL-ENGINE RESEARCH IN UNIVERSITIES—HORNING MEMORIAL LECTURE BY PROFESSORS P. S. MYERS AND O. A. UYEHARA, UNIV. OF WISCONSIN** - Reasons for conducting research in a university are presented and discussed. It is concluded that fuel-engine studies are compatible with these reasons, and, therefore, are well suited for university research. Past studies in this field are summarized, and unanswered questions and future topics suitable for university investigation are suggested. Included in the topics discussed are: Instrumentation, thermodynamic description of working fluids, fuel atomization and vaporization, combustion and instantaneous heat transfer, and mass flow rates. The steps that need to be taken to insure continuing university interest in fuel-engine studies are presented.
1.00 Mem. 2.00 List

- SP 285 **LP-GAS FOR ENGINES** - Many facets of LP-gas are covered in this collection of papers. Discussed are effects of LPG on engine performance, use of LPG as a motor fuel, the effects of altitude, humidity and temperature, as well as carburetion and other factors affecting propane fueled engines.
5.25 Mem. 7.00 List
- SP 263 **ENERGY DEPOT CONCEPT** - Nuclear powered energy depot concept is discussed in terms of reducing the Military supply burden. Fuel production and utilization is covered along with ammonia as an engine fuel.
2.25 Mem. 3.00 List
- SP 254 **ALCOHOLS AND HYDROCARBONS AS MOTOR FUELS** - Four papers providing information on comparative performance of alcohol and hydrocarbon fuels, ethyl alcohol and gasoline as a motor fuel, and exhaust hydrocarbon and nitrogen oxide concentrations from ethyl alcohol-gasoline fuel.
3.00 Mem. 4.00 List

MATERIALS

- SP 291 **PLASTICS AND PLASTICS PROCESSING FOR THE AUTOMOTIVE ENGINEER** - Provides information on plastic fundamentals, processing and its relation to performance, blow molding, machinery and equipment injection molding, tools for plastic processing and their relation to product design, and current and future applications of plastics in the automotive industry.
4.50 Mem. 6.00 List
- SP 268 **EVALUATING THE SURFACE TEXTURE OF COLD ROLL SHEET STEEL FOR AUTOMOTIVE PANELS** - Development of a procedure and equipment for determining surface texture peak count, operation of measuring instrumentation, evaluation of measuring methods, and correlation of instrumentation with painted appearance are among the topics covered.
3.00 Mem. 4.00 List
- SP 181 **MECHANICAL PRESTRESSING** - Summary of reports presented at a 1960 meeting of SAE ISTC Division 20 on Mechanical Prestressing of Metals. Discussed are: Simplified theory for dynamic failure in solid materials; optimum method, intensity, and coverage of mechanical prestressing, selection of optimum conditions of mechanical prestressing; choosing optimum method, intensity, and coverage of shot peening; evaluations of fine particle abrasive blasting and other methods of surface movement; and shock forming.
1.00 Mem. 2.00 List

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