

Model 98RC Engine

Model B12RC Engine

Model E15RC Engine

Model E20RC Engine

Model F32A-RC Engine

Model F42A-RC Engine

OILWELL

Oilfield Power Unit Selection Manual

OILWELL service is second to none. Over 100 sales offices and oilfield service stores are located throughout the United States, Canada and Overseas to serve our customers. When technical information or engine service replacement parts are required, there is an interested OILWELL representative and/or store to fill your needs.

OILWELL offers service for what it sells. When you buy a new unit, an OILWELL representative will assist with technical information to assure you the best possible installation to suit your particular needs. He will be present at first

The selection charts and information in this manual will enable you to quickly choose the OILWELL prime mover best suited to your pumping or other requirements. We have a complete line of engines that develop from 9 bhp at 1200 rpm to 42 bhp at 750 rpm.

Simplicity of design makes them easy to start and operate. The design arrangement of engine components and accessories provides for minimum down time for preventative maintenance and for service replacement.

They are completely weatherproof, making them year-round performers without protective enclosures.

OILWELL engines are smooth running through

GENERAL INFORMATION

The following general provision may be used to assure trouble-free engine performance:

1. OILWELL engine power units do not require "special" bases; however, initial effort to provide an adequate base, consistent with the unit size, base extension, etc., will pay big dividends with maximum smoothness of engine operation.
2. Engine slide rails should be used to provide drive belt adjustment. Cast iron rails are preferred and the rail slots are best when mounted parallel to the engine cylinder centerline.
3. Belt guards for P.T.O. should be made so that they are easily removed in sections for service when required.
4. Natural gas fuel should enter the engine carburetor from a volume tank at 4 to 6 oz./sq. in. pressure. The volume tank should have valve or plug to remove condensate. Connection to engine to be same size pipe as used for carburetor inlet and line should have flexible joint or hose to remove strain from carburetor regulator casting.

The carburetor will function equally well using LPG (Liquified Petroleum Gas) as primary fuel.

Adjust the volume tank pressure to approximately 3 to 5 oz./sq. in. and corresponding adjustment to the carburetor power valve.

5. The water for the cooling system should be as mineral-free as possible. For best results use "city water," or rain water. Rust inhibitors are recommended to protect the radiator. Commercial

start up, or shortly thereafter, to be sure of proper performance of unit and instruction of operating personnel.

OILWELL guarantees what it sells. All our efforts are directed at the satisfactory performance of our equipment and the continued good relationship of our customers. Our guarantee and service policy is the customer's assurance of unit performance.

Nationally recognized engine accessories and engine components are used to assure quality and service availability.

their entire speed and horsepower ranges. This feature is of particular importance when planning a new installation because of need for only minimum concrete foundation or structural steel base arrangement.

Due to the four stroke cycle used on OILWELL engines the customer is not restricted as to the type and length of exhaust system that can be used. A "tuned" exhaust length for a particular engine rpm is not required.

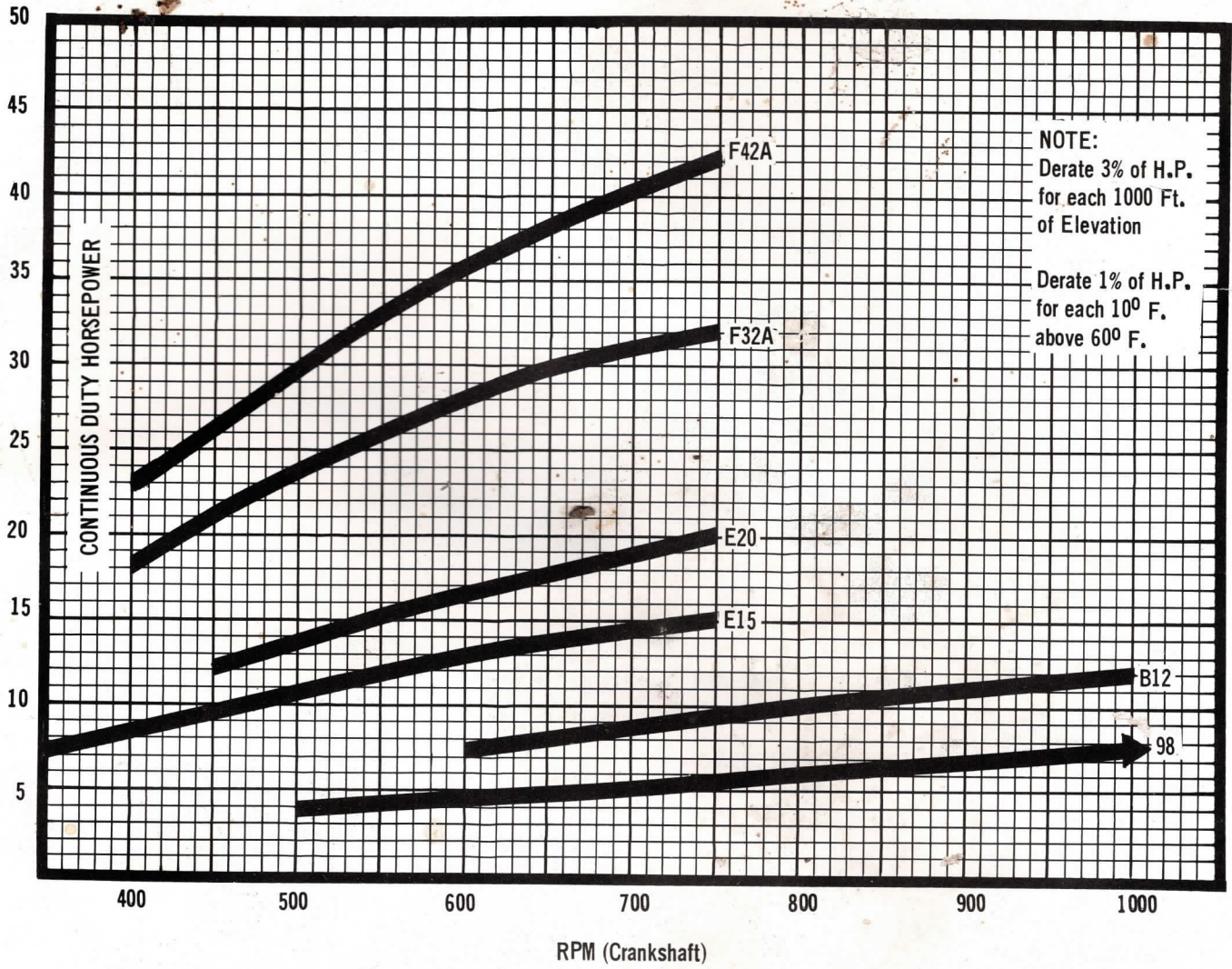
The four stroke cycle provides for use of a wide range of casing head gas, processed natural gas, or LPG, at maximum fuel economy. Gasoline may also be used as a fuel, when required.

- grade "permanent type" (ethylene glycol) anti-freeze may be used with water (60/40 ratio maximum) to protect the cooling system in cold weather. Do not use alcohol type anti-freeze.
6. For electric starting units, the battery should be heavy duty and of proper size for the engine and the weather conditions of your area.
7. A regular preventative maintenance and routine service program, based on information in "Care and Operation Manual" will assure long trouble-free performance.

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OILWELL ENGINES

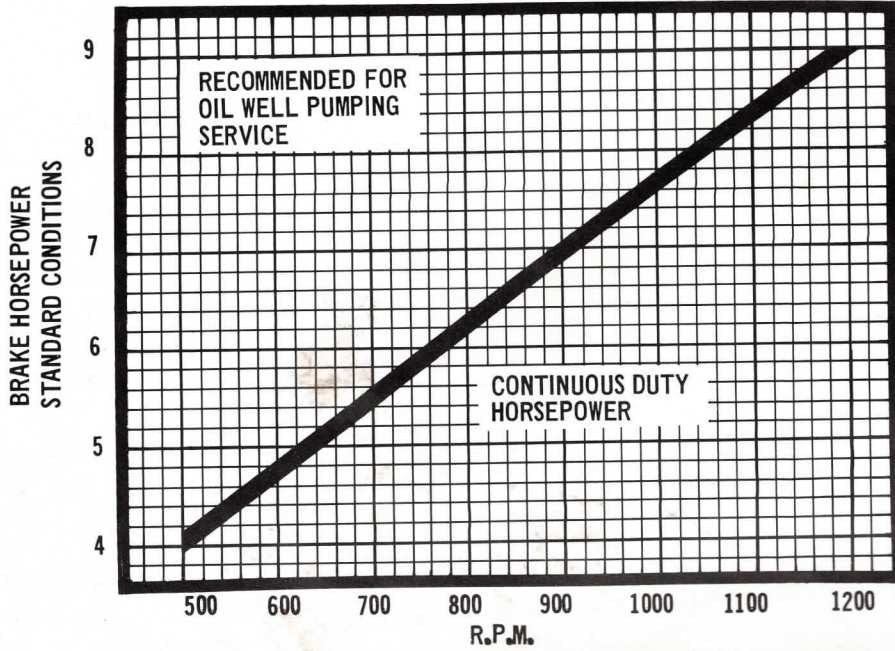


OILWELL MODEL 98 CONDENSER COOLED NAT'L GAS

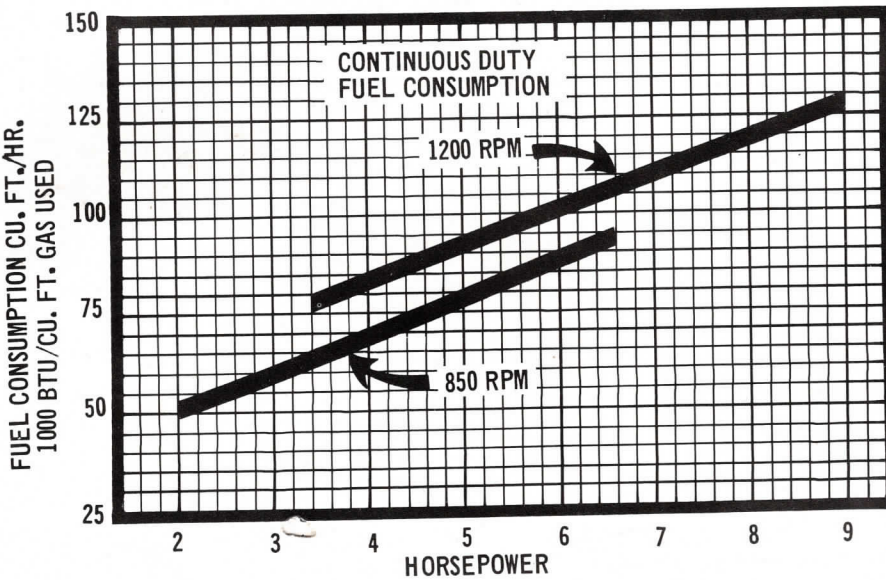
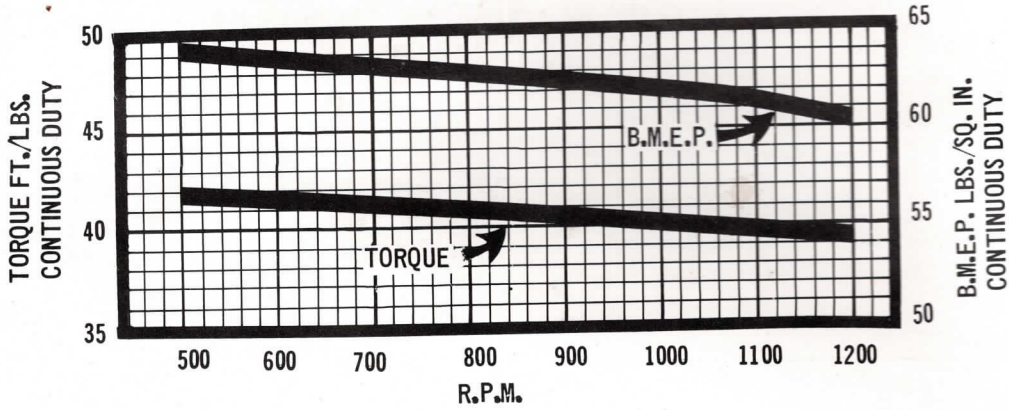
BORE - 5"
CYCLE - 4

STROKE - 5"
CYLINDERS - 1

DISPLACEMENT - 98.18 CU. IN.



NOTE:
DERATE 3% OF H.P. FOR EACH 1000 FT. OF ELEVATION
DERATE 1% OF H.P. FOR EACH 10⁰ F. ABOVE 60⁰ F.



MODEL 98RC

OILWELL Model 98RC gas-gasoline engine is a single-cylinder, horizontal, four-cycle, heavy-duty power unit designed for continuous operation. Its balanced crankshaft and heavy flywheel assure smooth operation through a wide speed range.

Standard equipment includes condenser cooling (radiator and fan), combination natural gas, LPG, gasoline carburetor, rotating magneto with impulse coupling, single flywheel, safety-starting crank, and clutch power take-off. A 12-volt electric starting system is available if desired.

FEATURES

Forged-Steel Crankshaft with integral counterweights is mounted in large tapered roller bearings.

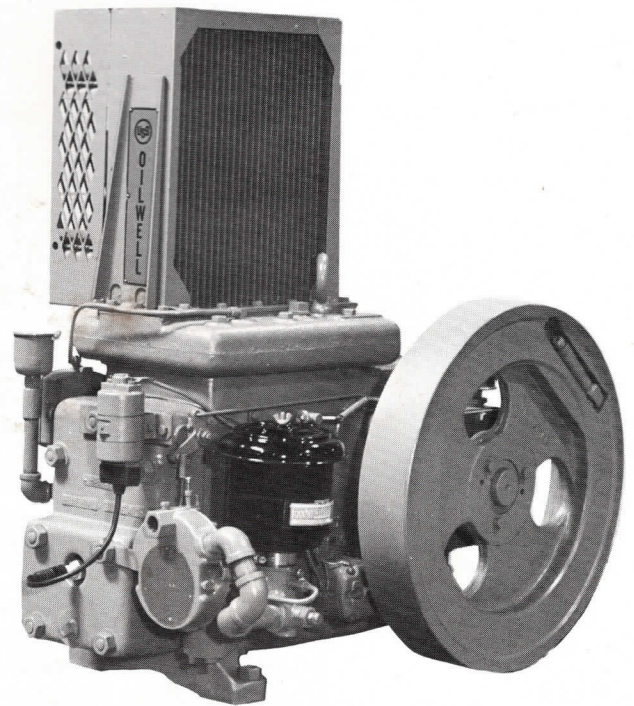
Aluminum Alloy Piston is fitted with three compression rings and one oil control ring for reduced liner wear and for full power. Light weight of this reciprocating part allows wide speed range for continuous operation.

Wet-Type Cylinder Liner is replaceable in the field. It is precision honed and equipped with two "O" rings for water seal and expansion.

Two-Piece Cylinder Head is cast iron with replaceable valve-stem guides.

Valve Tappet Adjustments are made easily through two large, conveniently-placed inspection openings in the cylinder block.

Special Combustion Chamber and connection passage in the cylinder head make possible the use of larger-than-conventional valves.



A Splash Flood System assures adequate lubrication of all moving parts. All parts requiring lubrication are enclosed within the crankcase.

Condenser-Type Cooling maintains uniform operating temperature and increases thermal efficiency.

SPECIFICATIONS

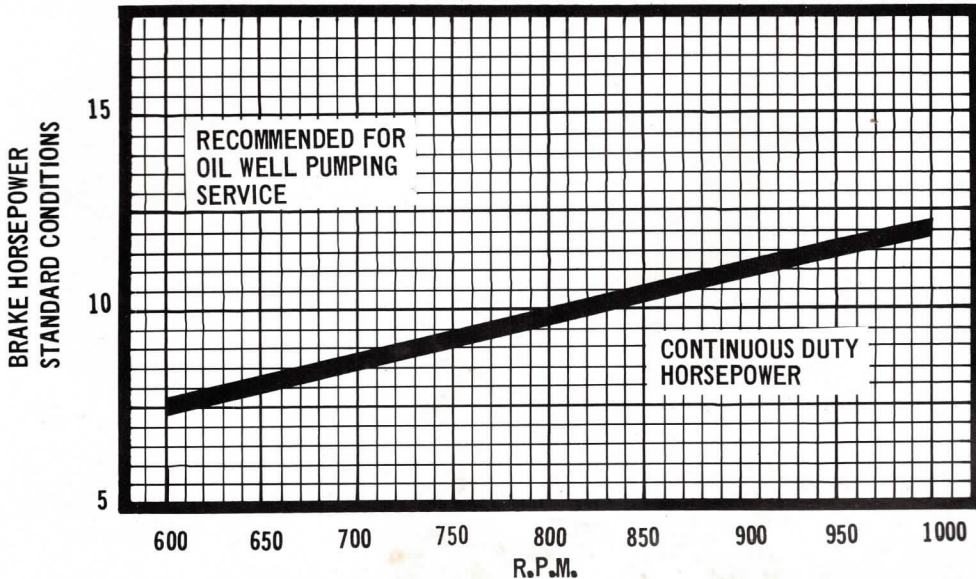
Bore	Inches	5
Stroke	Inches	5
Displacement	cu. in.	98
Speed Range	rpm	500-1,200
Gasoline Rating (Bare Engine) at:		
500 rpm	hp	4.4
750 rpm	hp	6.8
1,000 rpm	hp	9.0
1,200 rpm	hp	10.2
Natural Gas Rating (Condenser Cooled Engine) at:		
500 rpm	hp	4.0
750 rpm	hp	5.9
1,000 rpm	hp	7.8
1,200 rpm	hp	9.0
Rated Brake Mean Effective Pressure (Gasoline) 1,200 rpm	psi	69
Rated Brake Mean Effective Pressure (Natural Gas) 1,200 rpm	psi	60.5
Exhaust Connection (Pipe Size)	Inches	1½
Gas Intake Connection (Pipe Size)	inch	¾
Oil Capacity	qts.	4
Water Capacity (Condenser Cooling)	gals.	2¾
Fuel Capacity (Gasoline)	gals.	4
Shipping Weight -- Standard Equipment Only	pounds	710

OILWELL MODEL B12 CONDENSER COOLED NAT'L GAS

BORE - 5"
CYCLE - 4

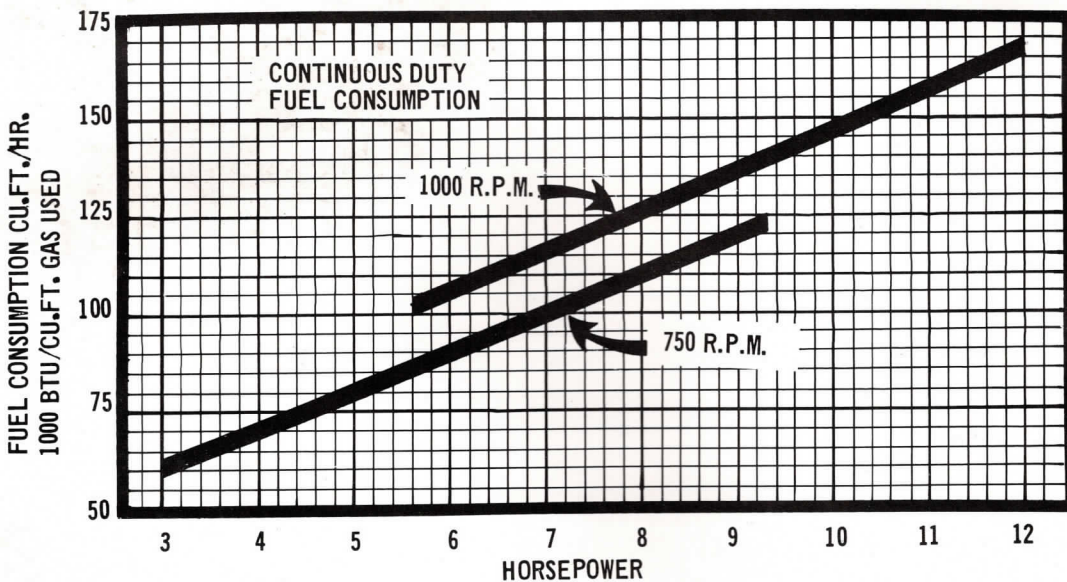
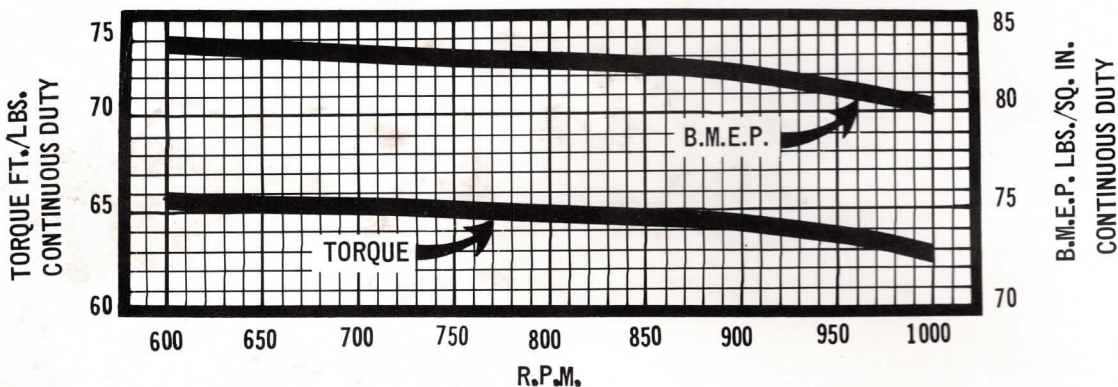
STROKE - 6"
CYLINDERS - 1

DISPLACEMENT - 118 CU. IN.



NOTE:
DERATE 3% OF H.P.
FOR EACH 1000 FT.
OF ELEVATION

DERATE 1% OF H.P.
FOR EACH 10° F.
ABOVE 60° F.



MODEL B12RC

This natural gas, LPG, gasoline engine is a four-cycle, heavy-duty, medium-speed, single-cylinder power unit with conventional power take-off. Electric, 12-volt starting equipment is available.

It is designed for continuous operation with weather-resistant construction permitting out-of-door operation the year around without protective covering.

FEATURES

Crankshaft is of heat-treated, forged steel, counter-balanced, and mounted in tapered roller bearings.

Piston is of aluminum alloy, precision ground, and fitted with four compression rings and two oil rings.

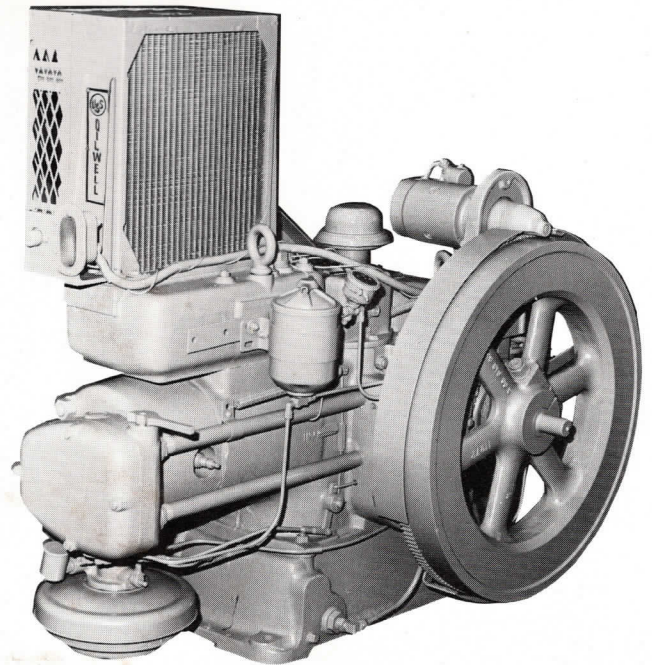
Cylinder Liner is of the wet type and precision honed. It can be replaced economically in the field.

Cylinder Head has large gas passages and is fitted with replaceable, alloy valve-seat inserts and valve guides.

Valves are heat-resistant alloy steel. Valve levers and push rods are entirely enclosed.

Ample Lubrication is assured by a combination pressure-feed and splash system.

Condenser-Type Cooling provides uniform operating temperatures to assure good thermal efficiency.



Forged-Steel Connecting Rod is equipped with aluminum-alloy bearing inserts. Bearings are shim-adjusted and equipped with a built-in oil reservoir. Piston pin is full-floating type and rides in a bronze bushing.

SPECIFICATIONS

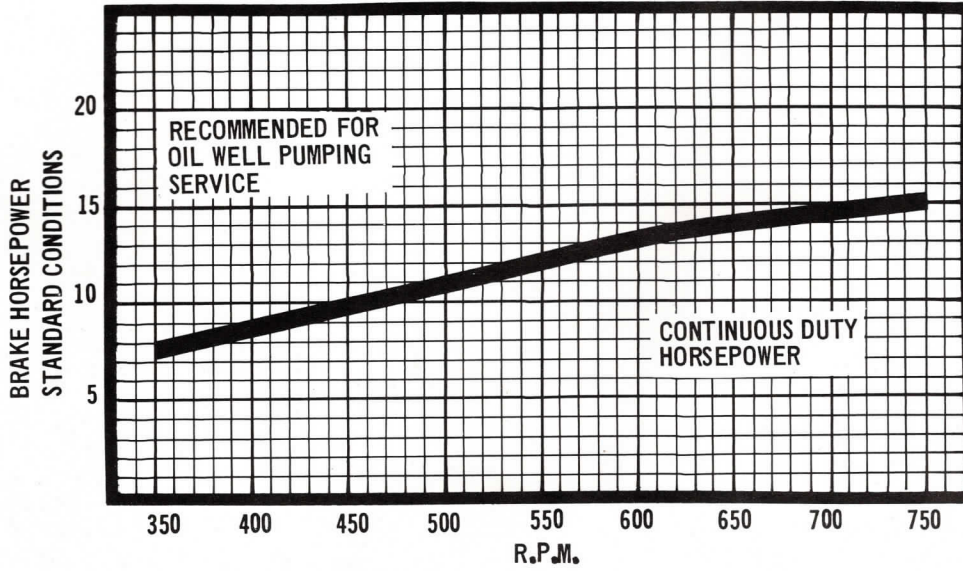
Bore	inches	5
Stroke	inches	6
Displacement	cu. in.	118
Speed Range	rpm	600-1,000
Natural Gas Rating:		
hp @ rpm		7.5 @ 600
hp @ rpm		8.6 @ 700
hp @ rpm		10 @ 800
hp @ rpm		11 @ 900
hp @ rpm		12 @ 1,000
Rated Brake Mean Effective Pressure (Natural Gas)	psi	80.5
Exhaust Connection (Pipe Size)	inches	2
Gas Intake Connection (Pipe Size)	inch	$\frac{3}{4}$
Oil Capacity	qts.	7
Water Capacity (Condenser Cooling)	qts.	9
Shipping Weight — Standard Equipment Only	pounds	1,066

OILWELL MODEL E15 CONDENSER COOLED NAT'L GAS

BORE - 6"
CYCLE - 4

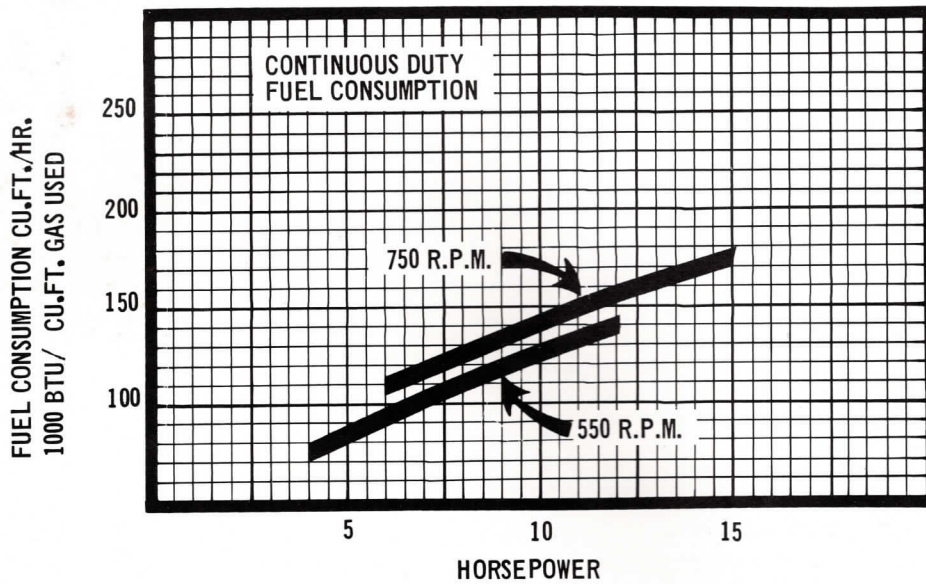
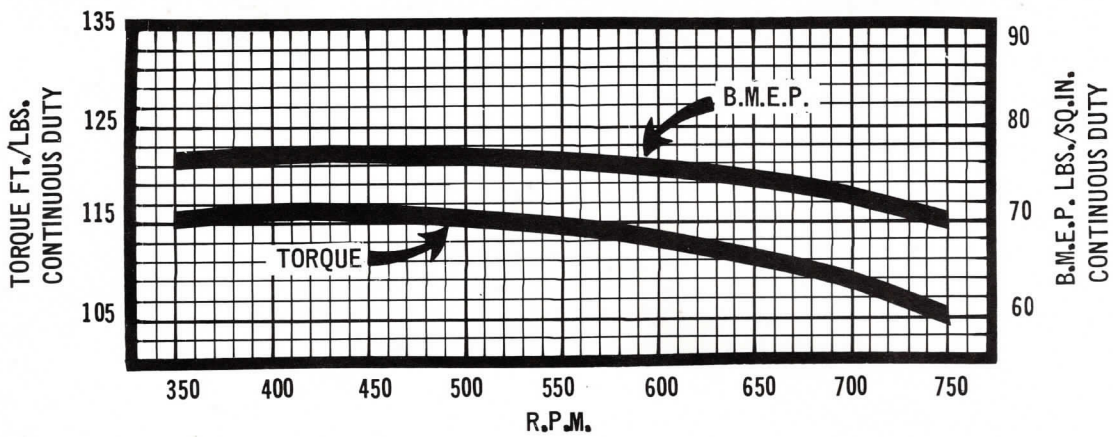
STROKE - 8"
CYLINDERS - 1

DISPLACEMENT - 226 CU. IN.



NOTE:
DERATE 3% OF H.P.
FOR EACH 1000 FT.
OF ELEVATION

DERATE 1% OF H.P.
FOR EACH 10⁰ F.
ABOVE 60⁰ F.



MODEL E15RC

OILWELL E15 single-cylinder, four-cycle engine runs on natural gas, LPG, or gasoline. It is a heavy-duty, medium-speed power unit with conventional power take-off. This engine can be equipped with 12-volt electric starting system.

Condenser cooling (radiator and fan), combination gas-gasoline carburetor, rotating solid state magneto with impulse coupling, single flywheel, safety-starting crank, and clutch power take-off are standard equipment.

FEATURES

Forged Alloy Steel Crankshaft is counterbalanced and mounted in tapered roller bearings.

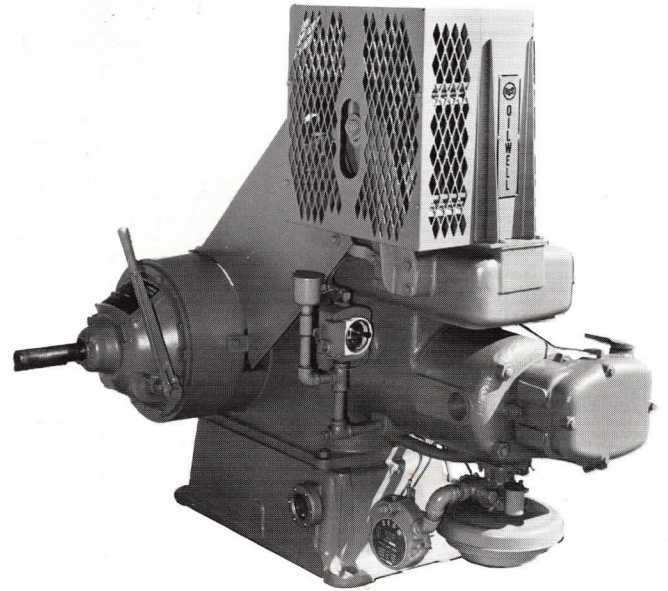
Cast Iron Piston has three compression and two oil control rings to provide for long cylinder life and minimum oil consumption. A full-floating, hardened and ground piston pin works in a replaceable bronze bushing.

A Precision-Honed Cylinder Liner is made of centrifugally cast, close-grain iron.

Cylinder Head with large inlet and exhaust ports is fitted with replaceable valve guides and valve seats inserts which are properly located and cooled to eliminate seat distortion.

Valves are heat-resistant alloy steel.

Lubrication of all working parts is assured by a combination splash and pressure system. Crankshaft main bearings, gears, governor and cylinder liner are splash lubricated. Connecting rod bearing is lubricated by a splash system and by-pass filter system.



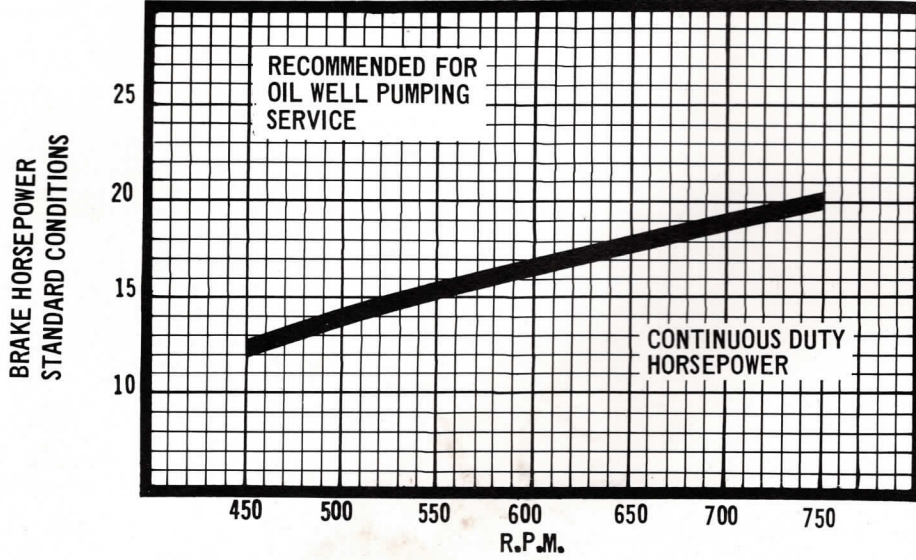
Condenser-Type Cooling System provides uniform engine temperatures and good thermal efficiency.

Connecting Rod is a steel forging fitted with a bronze piston-pin bushing.

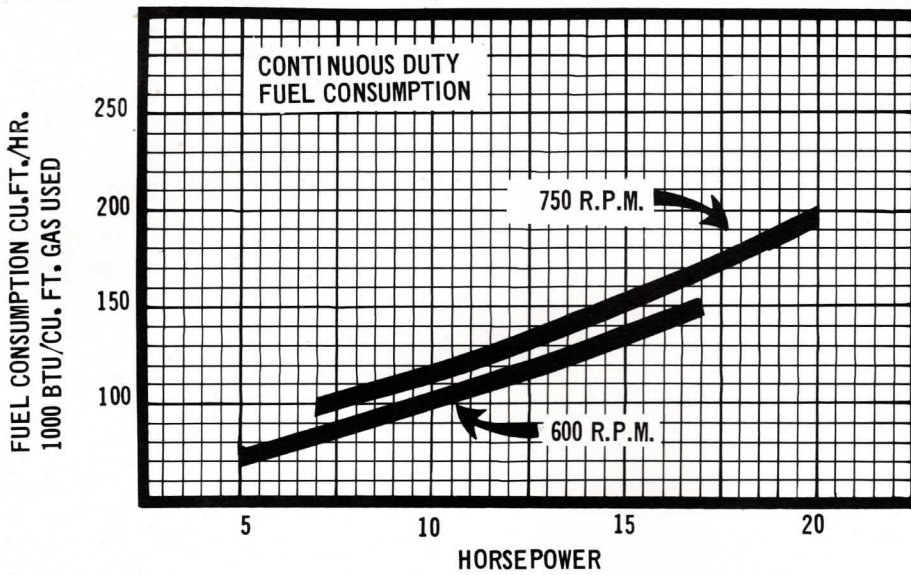
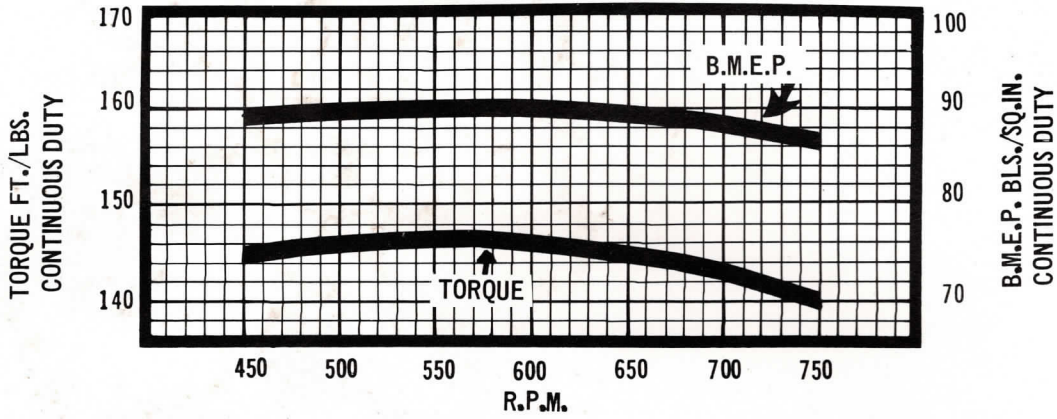
SPECIFICATIONS

Bore	inches	6
Stroke	inches	8
Displacement	cu. in.	226
Speed Range	rpm	350-750
Natural Gas Rating:		
hp @ rpm		7.7 @ 350
hp @ rpm		10.0 @ 450
hp @ rpm		12.1 @ 550
hp @ rpm		14.0 @ 650
hp @ rpm		15.0 @ 750
Rated Brake Mean Effective Pressure (Natural Gas)	psi	70
Exhaust Connection (Pipe Size)	inches	2
Gas Intake Connection (Pipe Size)	inch	3/4
Oil Capacity	qts.	11
Water Capacity (Condenser Cooling)	qts.	13
Shipping Weight -- Standard Equipment Only	pounds	1,700

OILWELL MODEL E20 CONDENSER COOLED NAT'L GAS
 BORE - 6¼" STROKE - 8"
 CYCLE - 4 CYLINDERS - 1 DISPLACEMENT - 245 CU. IN.



NOTE:
 DERATE 3% OF H.P. FOR EACH 1000 FT. OF ELEVATION
 DERATE 1% OF H.P. FOR EACH 10° F. ABOVE 60° F.



MODEL E20RC

This single-cylinder, four-cycle, heavy-duty, medium speed power unit runs on natural gas, LPG, or gasoline.

It has condenser cooling (radiator and fan), valve-in-head design, aluminum alloy pistons, flyball governor, precision-type connecting rod bearings and wet-type cylinder liner. If desired a 12-volt electric starting system can be furnished.

A heavy cast iron base, with wide spaced foundation bolt holes, plus extra weight in the balanced flywheel, contribute to a smooth running engine.

FEATURES

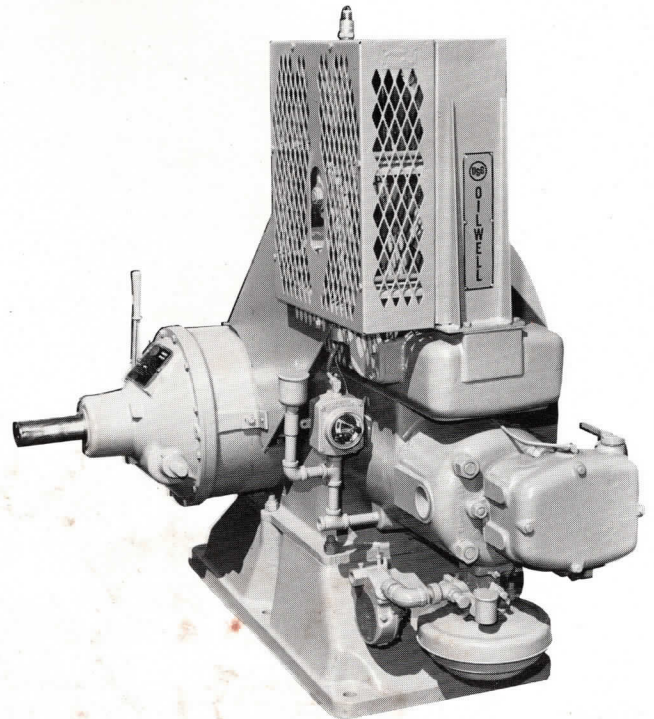
Crankshaft is of heat-treated, forged alloy steel and is counterbalanced and mounted in tapered roller bearings.

Cylinder Liner is precision honed, centrifugally cast, close-grain iron.

Cylinder Head has large inlet and exhaust ports and is fitted with replaceable valve guides and valve seat inserts.

Valve rotators are used on the stellite faced valves with stellite valve seats. Tappets and push rods are completely enclosed.

Ample Lubrication to all working parts of the E20 is assured by a combination splash and pressure system. Connecting rod bearing is lubricated by filtered oil, pressure-fed through the crankpin.



Condenser Type Cooling provides uniform operating temperatures and assures good thermal efficiency.

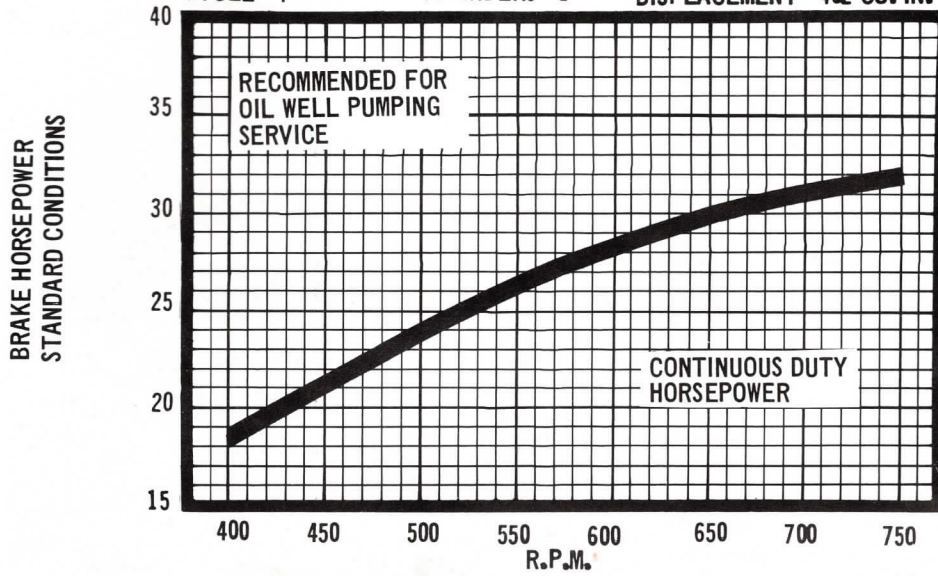
Connecting Rod is a steel forging with a precision type, steel-backed, aluminum lined crankpin bearing. This bearing does not require adjustment regardless of operating conditions of the engine.

SPECIFICATIONS

Bore	inches	6¼
Stroke	inches	8
Displacement	cu. In.	245
Speed Range	rpm	450-750
Natural Gas Rating: (continuous, for oil well pumping service)		
450 rpm	hp	12.4
550 rpm	hp	15.4
650 rpm	hp	18
750 rpm	hp	20
Rated Brake Mean Effective Pressure (Natural Gas)	psi	87
Exhaust Connection (Pipe Size)	inches	2
Gas Intake Connection (Pipe Size)	inch	¾
Oil Capacity	qts.	12
Water Capacity (Condenser Cooling)	qts.	13
Shipping Weight — Standard Equipment Only	pounds	2,230

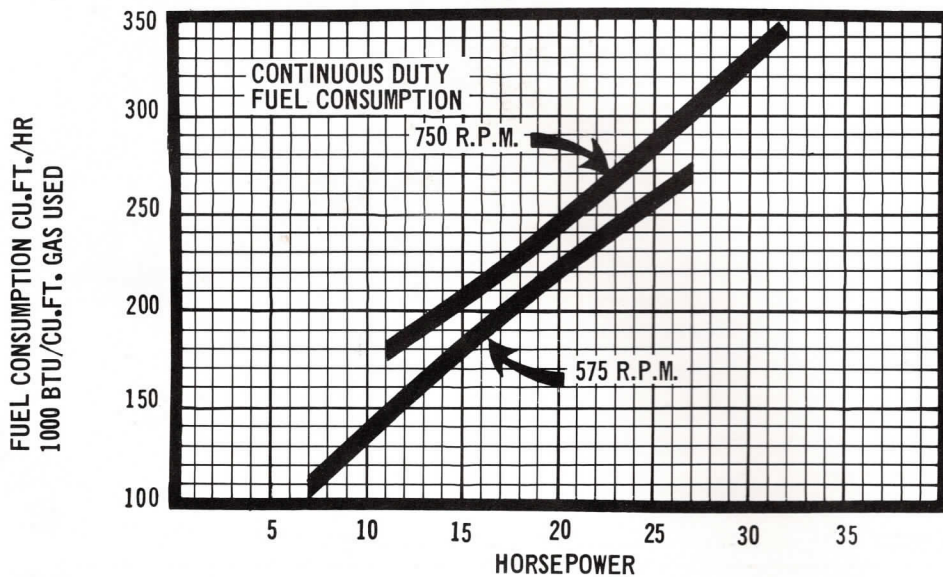
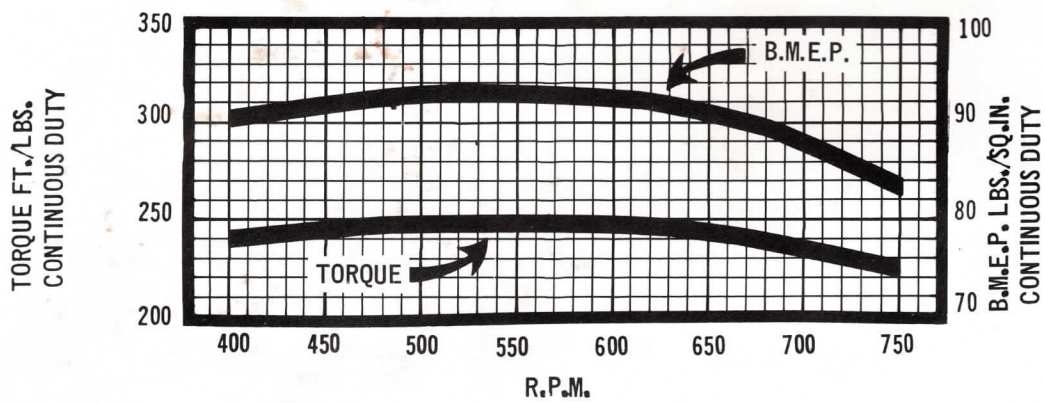
OILWELL MODEL F32A CONDENSER COOLED NAT'L GAS

BORE - 8" STROKE - 8" DISPLACEMENT - 402 CU. IN.
 CYCLE - 4 CYLINDERS - 1



NOTE:
 DERATE 3% OF H.P.
 FOR EACH 1000 FT.
 OF ELEVATION

DERATE 1% OF H.P.
 FOR EACH 10° F.
 ABOVE 60° F.



MODEL F32A-RC

OILWELL F32A is a four-cycle, single-cylinder, horizontal, condenser-cooled, natural gas, LPG, gasoline engine. It is completely weatherproof, making it a year-round performer without a protective enclosure. An electric, 12-volt starting system is available.

It is smooth-running through its entire speed and horsepower range. This characteristic provides maximum flexibility of installation on structural-steel pumping unit bases.

FEATURES

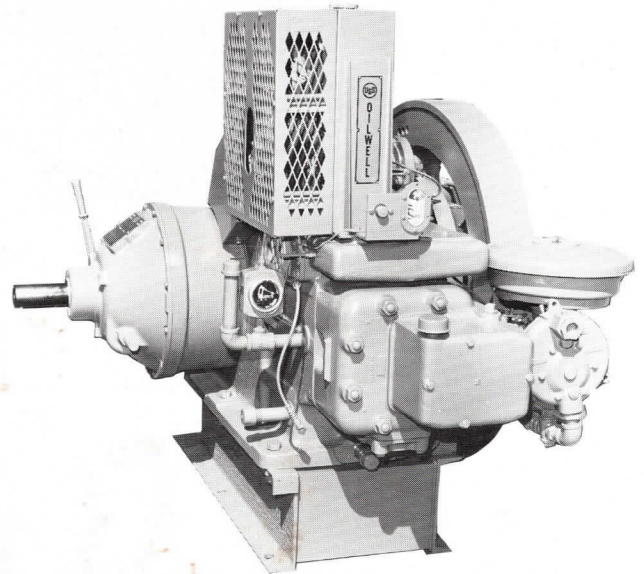
Forged Steel Crankshaft with removable counterweights is mounted in large, tapered-roller bearings.

Cast Iron Piston is fitted with three compression rings and two oil rings for reduced liner wear and full power.

Wet-Type Cylinder Liner is precision honed, can be installed in the field.

Cylinder Head has large integral water passages to provide ample cooling. Unrestricted inlet and exhaust passages assure maximum efficiency throughout the horsepower range.

Valve-in-Head Construction has a completely enclosed positive lubrication system to valve assembly. Valve guides, valve seats and valve rotators are replaceable for both intake and exhaust valves.



Lubrication is accomplished by an oil circulating pump operating through a high-pressure system in combination with a splash-flood system. A full-flow filter is standard equipment.

Condenser Type Cooling (radiator and fan) maintains uniform operating temperature and increases thermal efficiency.

SPECIFICATIONS

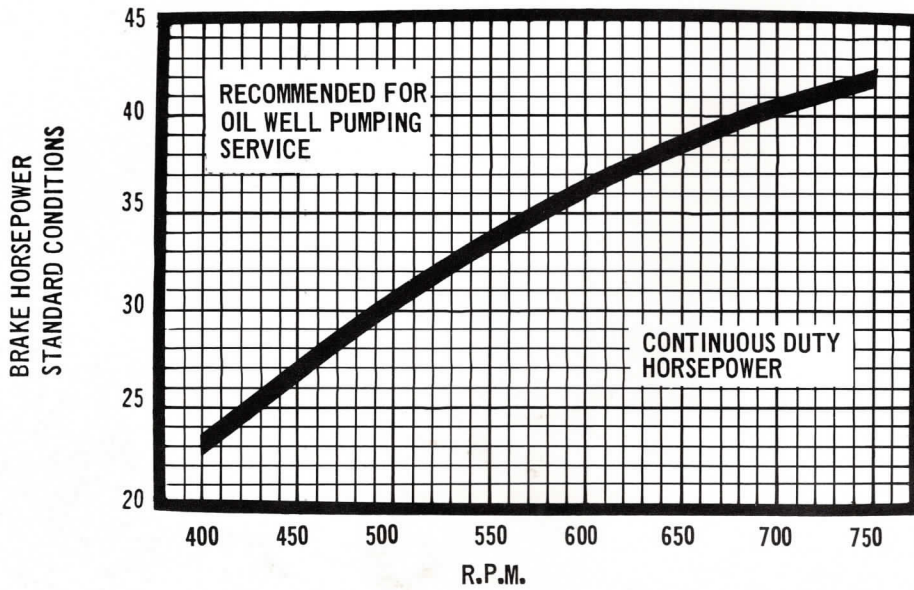
Stroke	inches	8
Bore	inches	8
Displacement	cu. in.	402
Speed Range	rpm	400-750
Natural Gas Rating at:		
400 rpm	hp	18½
450 rpm	hp	21¼
550 rpm	hp	26¼
600 rpm	hp	28¼
650 rpm	hp	30
750 rpm	hp	32
Rated Brake Mean Effective Pressure (Natural Gas)	psi	84
Exhaust Connection (Pipe Size)	inches	3
Gas Intake Connection (Pipe Size)	inch	1
Oil Capacity	qts.	16
Water Capacity (Condenser Cooling)	gals.	7½
Shipping Weight — Standard Equipment Only	pounds	2,800

OILWELL MODEL F42A CONDENSER COOLED NAT'L GAS

BORE - 8 3/4" CYCLE - 4

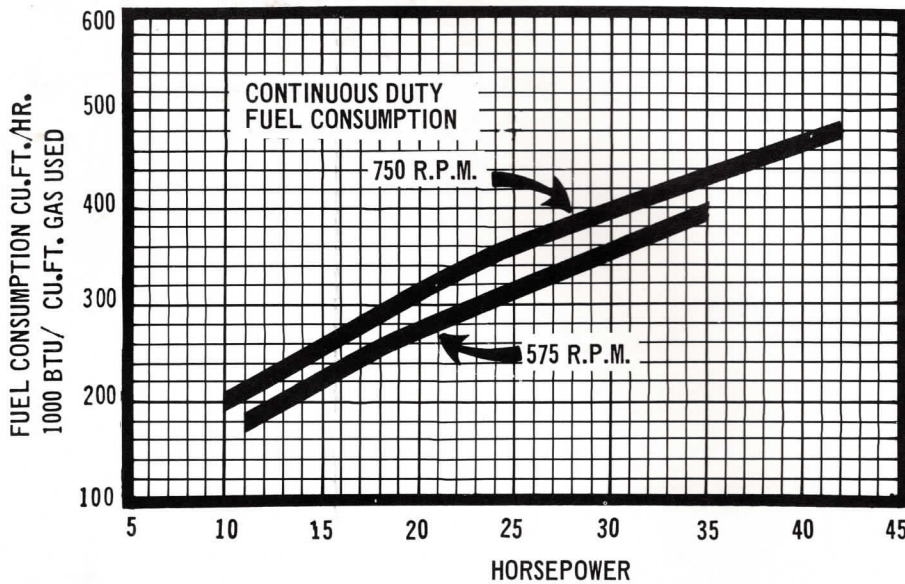
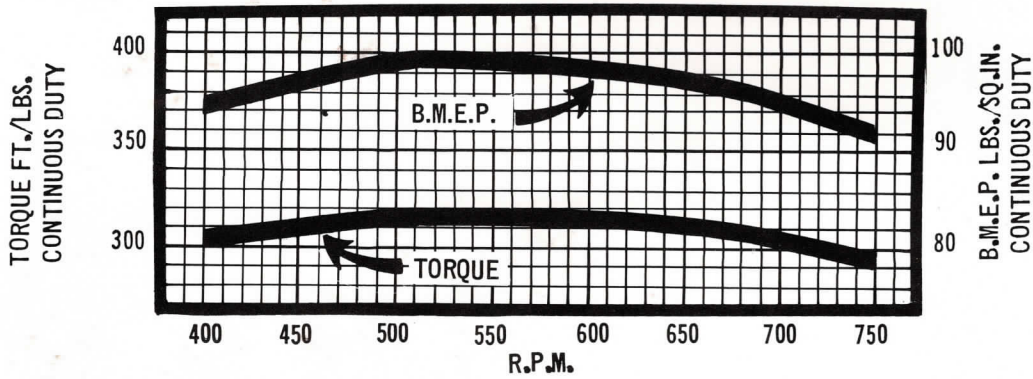
STROKE - 8" CYLINDERS - 1

DISPLACEMENT - 481 CU. IN.



NOTE:
DERATE 3% OF H.P.
FOR EACH 1000 FT.
OF ELEVATION

DERATE 1% OF H.P.
FOR EACH 10° F.
ABOVE 60° F.



MODEL F42A-RC

This natural gas, LPG, gasoline four-cycle engine is designed for continuous operation. It is completely weather-proof and can be operated the year around without protective covering.

It has condenser cooling (radiator and fan), valve-in-head design, aluminum alloy piston, flyball governor, forged steel crankshaft and wet-type cylinder liner. Electric, 12-volt starting equipment can be furnished when specified.

FEATURES

Forged Steel Crankshaft with removable counterweights is mounted in two large, tapered-roller main bearings.

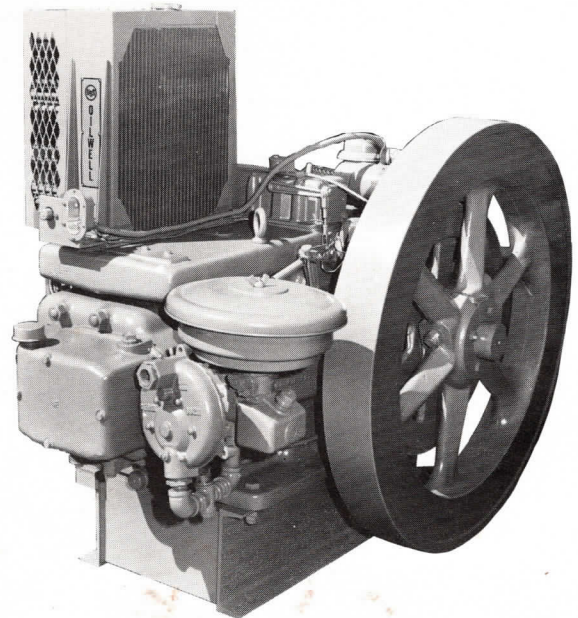
Aluminum Alloy Piston is equipped with three compression and two oil rings for reduced liner wear and full power.

Wet-Type Cylinder Liner is replaceable in the field.

Cylinder Head has large unrestricted intake and exhaust passages and is fitted with replaceable valve-seat inserts and valve guides. Its water jacket provides ample cooling.

Valve Rotators assure the long valve life of the stellite faced exhaust valves and stellite valve seats as well as the heat resistant alloy steel intake valves and seats.

Ample Lubrication is assured by a combination pressure-feed and splash system. A full-flow filter that adequately filters the oil at all times is standard equipment.



Condenser-Type Cooling provides uniform operating temperatures and assures good thermal efficiency.

SPECIFICATIONS

Bore	inches	8 $\frac{3}{4}$
Stroke	inches	8
Displacement	cu. in.	481
Speed Range	rpm	400-750
Natural Gas Rating at:		
400 rpm	hp	23.0
450 rpm	hp	26.8
550 rpm	hp	33.2
600 rpm	hp	36.2
650 rpm	hp	38.5
750 rpm	hp	42.
Rated Brake Mean Effective Pressure (Natural Gas)	psi	92.
Exhaust Connection (Pipe Size)	inches	3
Gas Intake Connection (Pipe Size)	inch	1
Oil Capacity	qts.	16
Water Capacity (Condenser Cooling)	gals.	7
Shipping Weight -- Standard Equipment Only.....	pounds	2,800

EXECUTIVE OFFICE

 P. O. Box 478
 Dallas, Texas 75221
 Telephone (214) 670-1511

MANUFACTURING PLANTS

 Garland Works
 4040 Forest Lane
 Box 401147
 Garland, Texas 75040
 Telephone (214) 276-6171

 Imperial Works
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 Oil City, Pa. 16301
 Telephone (814) 676-5681

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 425-9069

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 Telephone (405) 229-0366
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 Telephone (405) 632-3341,
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 McAlester
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