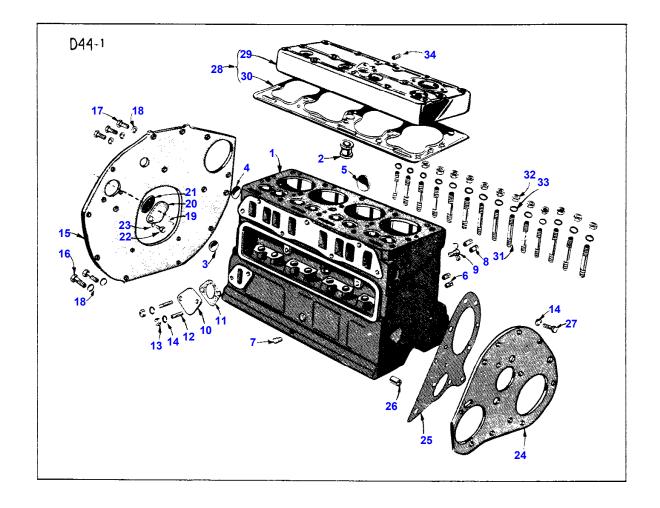
Massey Ferguson 22 / 22K TRACTOR TABLE OF CONTENT 690057 Page00-00

Page Title	Page Number
CYLINDER BLOCK, CYLINDER HEAD AND END PLATES	6
CRANKSHAFT, MAIN BEARINGS AND CAPS,	8
CRANKSHAFT, MAIN BEARINGS AND CAPS,	10
PISTONS, RINGS, PINS AND CONNECTING RODS (22K, 22)	12
ENGINE GASKETS AND SEALS (22K, 22)	16
VALVES, CAMSHAFT, TIMING GEAR AND COVER (22K, 22)	18
VALVES, CAMSHAFT, TIMING GEAR AND COVER (22K, 22)	20
OIL PUMP AND PRESSURE RELIEF VALVE, OIL PAN (GAS) (22K, 22)	22
OIL PUMP AND PRESSURE RELIEF VALVE, OIL PAN (LOW GRADE)	24
OIL PUMPS (GAS) USED ENGINE SERIAL NUMBERS 18317 THRU 29132	26
OIL PUMPS (GAS) USED PRIOR TO ENGINE SERIAL NUMBER 18317	28
OIL FILTER, OIL LINES AND PRESSURE GAUGE (22K, 22)	30
WATER PUMP, FAN AND STARTING CRANK (22K, 22)	32
RADIATOR AND ATTACHING PARTS (22K, 22)	34
MANIFOLD, MUFFLER, AIR CLEANER AND CARBURETER (22K, 22)	36
FUEL TANKS AND SUPPORTS, FUEL STRAINER AND LINES (22K, 22)	38
CARBURETER (22K, 22)	40
GOVERNOR, THROTTLE CONTROL AND CHOKE (22K, 22)	42
INSTRUMENT PANEL AND INSTRUMENTS, IGNITION, CABLES AND WIRES	44
DISTRIBUTOR (22K, 22)	46
LIGHTING EQUIPMENT (22K, 22)	48
GENERATOR	50
GENERATOR	52
STARTER (22K, 22)	54
FRONT AXLE AND SUPPORTS, SPINDLES AND TIE ROD (STANDARD)	56
FRONT AXLES AND SUPPORTS (ROW CROP) (22K, 22)	58
FRONT AXLES AND SUPPORT, SPINDLE AND TIE ROD	60
FRONT AXLES AND SUPPORT, SPINDLE AND TIE ROD	62
FRONT AXLES AND SUPPORT, SPINDLE AND TIE ROD	64
STEERING GEAR (STANDARD) 22K, 22	66
STEERING GEAR (STANDARD) 22K, 22 STEERING GEAR (ROW CROP) 22K, 22	68
STEERING GEAR (ROW CROP) 22K, 22 STEERING GEAR (ADJUSTABLE HI-ARCH) 22K, 22	70
STEERING GEAR (ADJUSTABLE HI-ARCH) 22K, 22 STEERING GEAR (SINGLE FRONT WHEEL) 22K, 22	70
TRANSMISSION CASE AND FRAME (22K, 22)	74
CLUTCH, CLUTCH SHAFT AND UNIVERSAL JOINTS (22K, 22)	76
CLUTCH, CLUTCH SHAPT AND UNIVERSAL JOINTS (22K, 22)	78
TRANSMISSION (22K, 22)	80
FINAL DRIVE GEARS AND DIFERENTIAL (22K, 22)	82
TRANSMISSION COVER AND CONTROLS BELT PULLEY (22K, 22)	84
	86
REAR AXLES AND SLEEVES, DRAWBAR (22K, 22)	88
BRAKES (22K, 22)	90
WHEELS (CURRENT)	
WHEELS, REAR (NON-CURRENT)	92
PLATFORMS AND FENDERS, DECALS (HOOD AND DOORS,	94
SEAT (22K, 22)	96
POWER TAKE-OFF, TOOL BOX AND TOOLS (22K, 22)	98
THREE POINT HITCH (LIFT SHAFT) (USED LATE MACHINES)	100
THREE POINT HITCH (USED EARLY MACHINES) 22K, 22	102
HYDRAULIC CYLINDER, VALVE AND CONTROLS (22K, 22)	104
HYDRAULIC CYLINDER, VALVE AND CONTROLS (22K, 22)	106

Massey Ferguson

wassey i eiguson	
22 / 22K TRACTOR	690057
TABLE OF CONTENT	Page00-00
CYLINDER AND COMPONENT PARTS	108
SEQUENCE VALVE W/ ONE FRONT HYDRAULIC CYLINDER (22K, 22)	110
SEQUENCE AND SELECTOR VALVES	112
HYDRAULIC PULL BEHIND CYLINDER, BREAKAWAY COUPLING AND LINES	114
HYDRAULIC PULL BEHIND CYLINDER, BREAKAWAY COUPLING AND LINES	116
HYDRAULIC OIL PUMP, OIL TANK AND LINES	118
HYDRAULIC OIL PUMP, OIL TANK AND LINES	120

CYLINDER BLOCK, CYLINDER HEAD AND END PLATES



DO NOT ORDER FROM ILLUSTRATION REFERENCE NUMBER, ALWAYS REFER TO DESCRIPTIVE LIST UNNUMBERED PARTS IN ILLUSTRATION ARE THE SAME AS CORRESPONDING PARTS SHOWN WITH NUMBERS

22 / 22K TRACTOR 690057 Page6

CYLINDER BLOCK, CYLINDER HEAD AND END PLATES

Item Part Number Qty Description

(SEE NOTE) (22K, 22)

1 1000622M91 1 (C) Cylinder Block Assembly (Stripped) (See Note) 1000623M91 1 Cylinder Block Assembly (Equipped W/ Pistons, Rings, Pins, Valves, Valve Springs And Valve Tappets) 1000624M91 1 Cylinder Block Assembly (Equipped W/ Pistons, Rings, Pins, Conn. Rods, Crandshaft, Valves, Valve Springs, Valve Tappets, Camshaft, Timing Gears And Front End Plate) (See Note) 760796M91 1 (C) Cylinder Block Assembly (Stripped) (See Note) 760798M91 1 Cylinder Block Assembly (Equipped W/ Pistons, Rings, Pins, Valves, Valve Springs And Valve Tappets) 761108M91 1 Cylinder Block Assembly (Equipped W/ Pistons, Rings, Pins, Conn. Rods, Crankshaft, Valves, Valve Springs, Valve Tappets, Camshaft, Timing Gears And Front End Plates (See Note) 2 15242A 1 Bushing For Oil Pump Drive Shaft 3 13518X 1 Plug, Rear Camshaft Bearing Hole (1-1/2" Exp.) 4 1692X 1 Plug, Cylinder Core Holes (1-1/8" Exp) 5 1793X 1 Plug, Cylinder Core Holes (1-3/8" Exp.) 6 7 16242X 2 Plug, Oil Passage (1/4" Ctsk. Hd. Pipe) 2802X 1 Plug, Oil Passage (1/8" Slotted Hd. Pipe) 8 2410X 2 Plug, Water Jacket Drain (1/4" Sq. Hd. Pipe) 9 763716M1 Drain, Cock 10 17166A 1 Cover, Fuel Pump Hole 11 17165A Gasket, Fuel Pump Hole Cover 12 21205A 2 Stud (5/16" NC x 1") 11922X 2 Nut (5/16" NC, Hex.) 13 14 2761X 3 Washer (5/16" Lock) 15 760785M1 Rear End Plate Only 16 15353A 1 Timing Pointer (# 10 x 3/4" Drive Screw) Cover. Pointer Hole 17 15354A 1 18 17058A 1 Cover Felt 19 12782X 1 Bolt, Cover To Plate (3/8 x 5/8" NC, Hex.) 20 2762X 1 Washer (3/8" Lock) 21 15355A 2 Dowel Screw, Plate To Block 22 12408X 3 Bolt, Plate To Block (7/16 x 1" NC, Hex.) 23 2763X 5 Washer (7/16" Lock) 24 35248A 1 Front End Plate 25 760357M1 1 Gasket, End Plate To Block 26 15332A 1 Dowel, End Plate To Block 27 2425X 1 Bolt (5/16 x 3/4" NC, Hex.) 28 840202M91 1 Cylinder Head And Gasket Kit, Low Grade, Regular (5:1) 22K 29 760800M91 Cylinder Head Assembly (Order 840202M91) 22K 30 32648A Gasket, Cylinder Head To Block 28 840203M91 (A) Cylinder Head And Gaskey Kit, Low Grade, he-Altitude (6.03:1) 22K 29 1 760838M91 Cylinder Head Assembly (Order 840203M91) 22K 30 1 32648A Gasket, Cylinder Head To Block (22K) 28 840556M91 1 (B) Cylinder Head And Gasket Kit, Gas, Regular (6.50:1) 22K 29 760800M91 1 Cylinder Head Assembly (Order 840202M91) 22K 30 32648A 1 Gasket, Cylinder Head To Block (22K) 28 840203M91 1 (A) Cylinder Head And Gaskey Kit, Low Grade, Hi-Altitude (6.03:1) 29 760838M91 1 Cylinder Head Assembly (Order 840203M91) 22K 30 32648A 1 Gasket, Cylinder Head To Block (22K) 28 840556M91 (B) Cylinder Head And Gasket Kit, Gas, Regular (6.50:1) 22 29 760848M91 1 Cylinder Head Assembly (Order 840556M91) 22 30 32648A 1 Gasket, Cylinder Head To Block (22) Stud, Cylinder Head To Block (7/16" NC-NF x 3-15/32") 22 31 15248A 15 17162A 15 Stud, Cylinder Head To Block (7/16" NC-NF x 3-11/16") 32 15268A 15 Nut (7/16" NF, Hex.) 33 15269A 15 Washer (7/16" Special Flat) 34 19363X 1 Plug, Spring Retainer (1/2" P.T., Ctsk. Hd. Pipe) 22

> Note: All Cylinder Blocks Are Equipped With All Studs, Plugs, Camshaft Bearing, Main Bearings And main Bearing Caps. (A) - Cylinder Head And Gasket Kit 840203M91 Also Used On Gasoline Engines In 22 Tractors Prior To Engine Serial Number 19157. To Obtain higher

22 / 22K TRACTOR

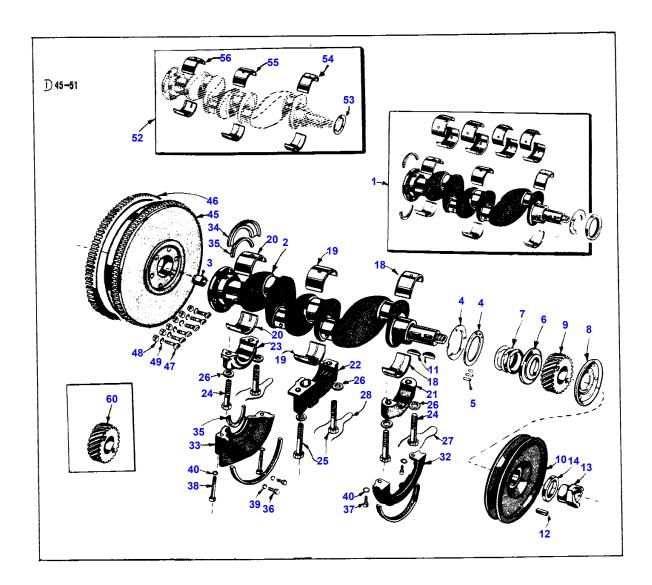
CYLINDER BLOCK, CYLINDER HEAD AND END PLATES Item Part Number Qty Description

Compression Ratio As Used On Current Engines, Can Be Replaced With 1 -840556M91 Cylinder Head Kit Plus 1 -15273A Distributor Drive Shaft. (B) - First Used Engine Serial Number 19157.

(C) - Cylinder Block Assembly Numbers 1000622M91 And 760796M91 Are Less Pistons And Are Not Considered Normal Repair Items. They Are Intended To Be Used Only When Replacing Block In New Engines That Have Been Damaged By Freezing Or In Shipment.

690057 Page6

8 CRANKSHAFT, MAIN BEARINGS AND CAPS, FILLER BLOCK AND FLYWHEEL



DO NOT ORDER FROM ILLUSTRATION REFERENCE NUMBER, ALWAYS REFER TO DESCRIPTIVE LIST UNNUMBERED PARTS IN ILLUSTRATION ARE THE SAME AS CORRESPONDING PARTS SHOWN WITH NUMBERS

Ref 8

56

60

35408A 1

1004126M1 AR

Bearing Assembly, Rear Main, - .040"

(A) Gear, Crankshaft Timing (-.001")

22 / 22K TRACTOR 690057

CRANKSHAFT, MAIN BEARINGS AND CAPS. Page8 Item Part Number Qty Description FILLER BLOCK AND FLYWHEEL (USED ENGINE SERIAL NUMBERS (GAS) 29133, (LOW GRADE) 28564 AND UP) 22K, 22 1 840477M91 1 Crankshaft And Bearing Kit (Incl. 1 - 32655A Crankshaft, 1 - 840473M91 Main Bearing Kit, 1 - 840087M91 Conn. Rod Beaing Kit, 1 - 15287A Oil Seal, 1 - 15288A Dust Seal And 2 - 1001408M1 Oil Seals) 2 32655A 1 Crankshaft Assembly (Order 840477M91) 3 15280A 1 Bushing, Crankshaft Pilot (5/8 x 13/16 x 3/4"") 4 15285A 2 Washer, Thrust, (2-9/32 x 3-1/16 x 3/32") 5 15240A 3 Pin, Dowel Thrust Washer To Block 6 15281A 1 Plate, Thrust 7 15283A AR Shim, Thrust Plate (.002") 15284A AR Shim, Thrust Plate (.004") 8 15286A 1 Thrower, Oil 9 Gear, Crankshaft Timing 32656A 1 33228A 1 10 Pulley, Fan Drive 12501X 2 Key (#15 Woodruff) 11 12 15291A 1 Plug, Keyway (Cork) 13 15289A 1 Jaw, Starting 14 15290A 1 Washer 91-3/8 x 2 x 1/4") 18 1000440M91 1 Main Bearing Assembly, Front (Incl. Upper And Lower Shells) (See 840473M91) 19 760353M91 Main Bearing Assembly, Center (Incl. Upper And Lower Shells) (See 840473M91) 20 760354M91 1 Main Bearing Assembly, Rear (Incl. Upper And Lower Shells) (See 840473M91) 21 1004860M1 1 Cap, Main Beaing, Front 22 1004863M1 1 Cap, Main Beaing, Center 23 1004862M1 1 Cap, Main Beaing, Rear 24 Bolt (1/2 x 2-5/8" NC, Hex., Drilled) 1004861M1 4 15235A 2 Bolt (1/2 x 3-1/4" NC, Hex., Drilled) 25 Washer (1/2" Flat, Special) 26 15233A 6 27 15234A 2 Wire, Lock (#19 - 10") 28 15236A 1 Wire, Lock (#19 - 12") 32 32674A 1 Filler Block, Front 33 6226A 1 Filler Block, Rear 34 32682A 1 Guard, Oil 35 1001408M1 2 Seal, Oil (Jute Yarn) 36 15227X 2 Bolt, Rear Filler Block (1/4 x 5/8" NC, Hex.) 37 22110X 2 Screw, Front Filler Block (5/16 x 7/8" NC, Socket Hd.) 38 22115X 2 Screw, Rear Filler Block (5/16 x 2-5/8" NC, Socket Hd.) 39 2760X 2 Washer (1/4" Lock) 40 15492X 4 Washer (5/16" Int. Skpf.) 45 1 Flywheel Assembly 32652A 46 32654A 1 Starter Ring Gear 47 15279A 6 Bolt, Flywheel To Crankshaft (3/8 x 1-3/16" NF, Special) 48 12177X 6 Nut (3/8" NF, Hex.) Washer (3/8" Int. Skpf.) 49 15200X 6 52 840473M91 1 Bearing Set, Main Std. 53 15285A 1 Washer, Thrust, (2-9/32 x 3-1/16 x 3/32") 54 1000440M91 1 Bearing Assembly, Front Main Std. 55 760353M91 1 Bearing Assembly, Center Main Std. 56 760354M91 1 Bearing Assembly, Rear Main Std. 52 840474M91 1 Bearing Set, Main, - .002" Washer, Thrust, (2-9/32 x 3-1/16 x 3/32") 53 15285A 1 54 1000441M91 1 Bearing Assembly, Front Main, - .002" 55 34407A 1 Bearing Assembly, Center Main, - .002" 56 34412A 1 Bearing Assembly, Rear Main, - .002" 52 840475M91 1 Bearing Set, Main, - .020" 53 15285A 1 Washer, Thrust, (2-9/32 x 3-1/16 x 3/32") 1000442M91 1 54 Bearing Assembly, Front Main, - .020" 55 34411A 1 Bearing Assembly, Center Main, - .020" 56 34416A 1 Bearing Assembly, Rear Main, - .020" 52 Bearing Set, Main, - .040" 840476M91 1 53 15285A 1 Washer, Thrust, (2-9/32 x 3-1/16 x 3/32") 54 1000443M91 1 Bearing Assembly, Front Main, - .040" 55 1 Bearing Assembly, Center Main, - .40" 35407A

Massey Ferguson

22 / 22K TRACTOR 690057 Page8

CRANKSHAFT, MAIN BEARINGS AND CAPS,

Item Part Number Qty Description 1004127M1 AR (A) Gear, Crankshaft Timing (-.002") 1004128M1 AR (A) Gear, Crankshaft Timing (-.003") 1004129M1 AR (A) Gear, Crankshaft Timing (-.004") 1004130M1 AR (A) Gear, Crankshaft Timing (-.005") (A) Gear, Crankshaft Timing (-.006") 1004131M1 AR (A) Gear, Crankshaft Timing (+.001") 1004132M1 AR 1004133M1 AR (A) Gear, Crankshaft Timing (+.002") 1004134M1 AR (A) Gear, Crankshaft Timing (+.003") 1004135M1 AR (A) Gear, Crankshaft Timing (+.004") 1004136M1 AR (A) Gear, Crankshaft Timing (+.005") 1004137M1 AR (A) Gear, Crankshaft Timing (+.006")

> (A) - Undersize And Oversize Gears Are Furnished On Special Order When Needed To Obtain Quiet Gear Operation.