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Engine Instructions		M104 M104 M104 M104 M104
M1046.013		M104 M104 M104 M104 M104
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M1043.019 M1046.025 M1046.025 M1046.025 M1046.025 M1046.025 M1046.025 M1042.04 M1042.033 M1042.043 M1042.033 M1042.033 M1042.033 M1042.038 M1042.008 M1042.008 M1042.008 M1042.008 M1042.008 M1042.009	2.008  2.008  - M1042.042  M1042.039  M1042.019  M1042.015  M1042.041	M104 M104 M104 M104 M104 M104 M104 M104
	- M1040.015	

M1040.003   DRIVE COPPER CONE     M1040.013   MAIN MEDIE VALVE HIB     M1040.015   MAIN NEEDIE VALVE HIB     M1040.015   MAIN NEEDIE SCREW     M1040.0201   THROTILE SCREW GAP     M1040.0201   THROTILE SCREW GAP     M1042.006   THROTILE SCREW GAP     M1042.007   CABBURETOR SETTING PIN     M1042.008   REAR GOVER 'O' RING     M1042.009   RESSLIKE SPRING     M1042.000   REAR GOVER 'O' RING     M1042.000   RAN' BALL BEARING SEAT     M1043.000   RAN' BALL BEARING SEAT     M1043.001   RAN' BALL BEARING SEAT     M1043.001   RAN' BALL BEARING SEAT     M1043.001   RAN' BALL BEARING SEAT     M1043.000   RAN' BALL BEARING SEAT     M1043.000   RAN' BALL BEARING SEAT     M1043.000   RAN' BALL BEARING SEAT     M1044.000   RAN' BALL BEARING SEAT     M1045.000   RAN' BALL BEARING SEAT     M1045.000   RAN' BALL BEARING SEAT     M1045.000   RAN' BALL BEARING SEAT     M1046.000   RAN' BALL BEARING S		COPPER CONE
MANN NEEDLE VAUVE  REAR COVER BOLT (W.2.K.6) 4PCS  MANN NEEDLE VAUVE HUB  THROTTLE STOP ADJUST. SCREW  ADJUSTED SCREW SPRING  THROTTLE STOP ADJUST. SCREW  ADJUSTED SCREW CAP  CONNECTING PING  RECOIL STARTING PIN  REAR COVER "O" RING  STARTING AXLE  STARTING BING  STARTING STRING  ONE WAY BARIL BEARING  STARTING AXLE  STARTING STRING  ONE WAY BARIL BEARING  STARTING STRING  ONE WAY BEARING  CARBURETOR MAIN BODY  STRING SEAT  SILCON EXHAUST GASKET  BALL BEARING SEAT  SILCON EXHAUST GASKET  BALL BEARING SEAT  ONE WAY BEARING  CARBURETOR MAIN BODY  STRING SEAT  BALL BEARING SEAT  ONE WAY BEARING  CARBURETOR COVER  CARBURETOR COVER  CARBURETOR COVER  CARBURETOR COVER  CARBURETOR CONDITE  THROTTLE NEEDLE  THROTTLE NEEDLE  CARBURETOR COMPLETELY (SLIDE  CRANKSHAFT  BALL BEARING REAR  SUPPLY NEEDLE VALVE  THROTTLE NEEDLE  THROTTLE NEEDLE  CYLINDER HEAD WASHER  CYLINDER HEAD BOLT 4PCS  WASHER GOAS, 1x, 5  FUEL NOZZIE  WASHER OSX4, 1x, 7, 5		
MAIN NEEDLE VALVE NOUT  THROTTLE STOP ADJUST. SCREW ADJUSTED SCREW CAP THROTTLE STOP ADJUST. SCREW ADJUSTED SCREW SPRING THROTTLE STOP ADJUST. SCREW ADJUSTED SCREW SPRING CARBURETOR SETTING PIN REAR COVER "O" RING REAR COVER "O" RING REAR COVER SE BUFFER HEAD WASHER SEAT ONE WAY BEARING SAST STARTING ANL ESSURE SPRING ONE WAY BEARING SAST STARTING ANL ESSURE SPRING ONE WAY BEARING SAST SILLON EXHAUST GASKET BALL BEARING TROMT CARBURATOR "O" RING REAR COVER CARBURATOR "O" RING REAR BACK COVER CARBURATOR SEAT THROTTLE NEEDLE THROTTLE NEEDLE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAT BALL BEARING REAR SCREW CYLINDER HEAD WASHER CYLINDER HEAD BOLT APCS WASHER GOAS, 1x7,5 FUEL NOZZIE WASHER OSA, 1x7,5 FUEL NOZZIE		NEEDLE VALVE
THROTTLE STOP ADJUST. SCREW ADJUSTED SCREW SPRING THROTTLE SCREW SPRING THROTTLE SCREW SPRING THROTTLE SCREW SPRING CARBURETOR SETTING PIN REAL COVER "O" RING REAL COVER "O" RING REAL COVER SE BUFFER HEAD WASHER SEAT ONE WAY BALL BERRING STARTING ANLE STARTING PIN PRESSURE SPRING HANDLE STARTING PIN PRESSURE SPRING ONE WAY BALL BERRING STARTING PIN PRESSURE SPRING HANDLE STARTING ANLE STARTING PIN PRESSURE SPRING HANDLE CARBURATOR "O" RING REAR COVER THREAD SEAT SILLON EXHAUST GSKET BALL SEARING SEAT SILLON EXHAUST CRANKCASE CARBURATOR "O" RING REAR BACK COVER CARBURETOR MAIN BODY STRING SEAT THROTTLE COVER THROTTLE COVER CARBURETOR COMPLETELY (SLIDE CRANKSHAT BALL BEARING REAR SUPPLY NEEDLE VALVE THROTTLE NEEDLE THROTTLE NEEDLE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAT BALL BEARING REAR SCREW CYLINDER HEAD BOLT APCS WASHER GOAS, 1x7,5 FUEL NOZZIE WASHER O.CX.1, 1x7,5		COVER BULI (MZ.6X6) 4PCS NFEDI F VALVE HIIR
ADJUSTED SCREW SPRING THROTTLE SCREW CAP CONNECTING ROD "G"PIN SNAP RING 2 PCS CARBINELOR SETTING PIN REAC COVER "G" RING RECOL STARTING UNIT EDDY SPRING STARTING SIRNG ONE WAY BARLIE BEARING STARTING AXLE STARTING AXLE STARTING AXLE STARTING SIRNG ONE WAY BEARING SEAT SILLON EXHAUST GASKET BALL BEARING SEAT SILLON EXHAUST GASKET REAR BACK COVER ONE WAY BEARING SEAT SILLON EXHAUST GASKET BALL BEARING SEAT SILLON EXHAUST GASKET CARBURATOR "G" RING REAR BACK COVER CARBURATOR "G" RING REAR BACK COVER CARBURATOR "G" RING REAR BACK COVER THEAD SEAT THEAD SEAT BALL BEARING FROM CARBURATOR CONPECTIVE SEAT ONE WAY BALL BEARING + SEAT THROTTLE NEEDLE THROTTLE NEEDLE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CYLINDER HEAD BOLT 4PCS WASHER GOAS, 1x7,5 FUEL NOZZIE WASHER OSA, 1x7,5 FUEL NOZZIE WASHER OSA, 1x7,5 FUEL NOZZIE WASHER OSA, 1x7,5 FUEL NOZZIE		TTLE STOP ADJUST. SCREW
CONNECTING ROD  "G" PIN SNAP RING 2 PCS CARBURETOR SETTING PIN REAR COVER "O" RING SUPPLY NEEDLE VALVE "O" RING SUPPLY NEEDLE VALVE "O" RING SUPPLY NEEDLE VALVE "O" RING SUPPLY STRING ONE WAY BALL BEARING STAFTING STRING ONE WAY BALL BEARING STAFTING PIN PRESSURE SPRING HANDLE STAFTING PIN PRESSURE SPRING CARBURATOR "O" RING REAR COVER THREAD SEAT SILLCON EXHAUST GASKET BALL BEARING FROM CARBURATOR WAN BODY STRING SEAT ONE WAY BALL BERRING + SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER STRING SEAT ONE WAY BALL BEARING FAR STRING SEAT ONE WAY BALL BEARING FAR STRING SEAT ONE WAY BALL BEARING RAR STRING SEAT ONE WAY BALL BEARING FAR STRING SEAT ONE WAS BALL BEARING FAR SCREW CYLINDER HEAD WASHER CYLINDER HEAD BOLT APCS WASHER DOXA, 1x, 7, 5 FUEL NOZZIE WASHER DOXA, 1x, 7, 5		STED SCREW SPRING
"G" PIN SNAP RING 2 PCS CARBURETOR SETTING PIN REAR COVER "O" RING REAR COVER "O" RING BODY SPRING STATTING STRING ONE WAY BALL BEARING STATTING ANL STATTING ANL STATTING ANL STATTING ANL ONE WAY BARING SEAT SILICON EXHAUST GRANK CARBURATOR "O" RING HANDLE STARTING PIN PRESSURE SPRING HANDLE CARBURATOR "O" RING REAR COVER SILICON EXHAUST GRANK CARBURATOR "O" RING REAR BACK COVER CARBURATOR "O" RING REAR BACK COVER THREAD SEAT SILICON EXHAUST SILICON EXHAUST THREAD SEAT SILICON EXHAUST THROTTLE COVER CARBURETOR COMPLETELY (SLIDE CARBURATOR CONNECTIVE SEAT ONE WAY BALL BALL BEARING REAR SURPU CARBURETOR COMPLETELY (SLIDE CARBURATOR CARBURATOR CARBURETOR COMPLETELY (SLIDE CARBURETOR COMPLETELY (SLIDE CARBURATOR CONNECTIVE SEEVE/PISTON BURN ROOM CYLINDER HEAD BOLT 4 PCS WASHER DOSA, 17,7,5 FUEL NOZZIE WASHER O.CX4, 17,7,5 FUEL NOZZIE WASHER O.CX4, 17,7,5		ECTING ROD
CARBURETOR SETTING PIN REAR COVER "O" RING SUPPLY NEEDLE VALVE" "O" RING SUPPLY NEEDLE VALVE" "O" RING RECOIL STARTING UNIT EDDY SPRING STARTING STRING ONE WAY BALL BEARING STARTING PIN PRESSURE SPRING HANDLE CARBURATOR "O" RING REAR COVER ONE WAY BEARING SEAT SILLCON EXHAUST GASKET BALL BEARING FRONT CARBURATOR "O" RING REAR COVER CARBURETOR "O" RING REAR BACK COVER CONNECTIVE SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER CARBURETOR COMPLETELY (SLIDE CARBURETOR SEEVE/PISTON BURN ROOM CYLINDER HEAD BOLT 4 PCS WASHER DOSA, 17, 5 FUEL NOZZIE WASHER OSA, 1, 7, 5 FUEL NOZZIE WASHER OSA, 1, 7, 5 FUEL NOZZIE WASHER OSA, 1, 7, 5		N SNAP RING 2 PCS
NAMIN NEEDLE VALVE  BEOOL STARTING  SUPPLY NEEDLE VALVE  EDDY SPRING  STARTING STRING  STARTING STRING  ONE WAY BALL BEARING  STARTING ALLE  STARTING ALLE  STARTING ALLE  STARTING ALLE  STARTING ALLE  STARTING STRING  ONE WAY BEARING  HANDLE  PULL START CRANKCASE COVER SE  BUFFER HEAD WASHER SEAT  ONE WAY BEARING  REAR COVER  CARBURATOR "O" RING  REAR BACK COVER  CARBURATOR COMPLETELY (SLIDE  CARBURETOR COMPLETELY (SLIDE  CARBURETOR COMPLETELY (SLIDE  CARBURETOR COMPLETELY (SLIDE  CARBURETOR COMPLETELY (SLIDE  CRANKSHAFT  BALL BEARING REAR  SURP  CYLINDER HEAD  WASHER O.GA4, 17.7.5  FUEL NOZZIE  WASHER O.GA4, 17.7.5		JRETOR SETTING PIN
SUPPLY NEEDLE VALVE "O" RING  RECOIL STARTING UNIT  EDDY SPRING  STARTING STRING  ONE WAY BALL BEARING  STARTING AXLE  STARTING AXLE  STARTING AXLE  STARTING AXLE  STARTING STRING  HANDLE  FRESSURE SPRING  HANDLE  BULL START CRANKCASE COVER SE  BUFFER HEAD WASHER SEAT  ONE WAY BEARING SEAT  SILICON EXHAUST GASKET  BALL BEARING ROMT  CARBURATOR "O" RING  REAR BACK COVER  THREAD SEAT  REAR BACK COVER  CARBURATOR "O" RING  REAR BACK COVER  THROTTLE COVER  SUPPLY NEEDLE VALVE  THROTTLE NEEDLE  CRANKSHAFT  BALL BEARING REAR  SUPPLY NEEDLE VALVE  THROTTLE NEEDLE  CRANKSHAFT  BALL BEARING REAR  SUPPLY NEEDLE VALVE  THROTTLE NEEDLE  CRANKSHAFT  BALL BEARING REAR  SURW  CYLINDER HEAD WASHER  CYLINDER HEAD BOLT 4PCS  WASHER GOSS, 1x7,5  FUEL NOZZIE  WASHER OSS, 1x7,5  FUEL NOZZIE  WASHER OSS, 1x7,5		COVER U KING NFFDI FVAIVE "O" RING
RECOIL STARTING UNIT EDDY SPRING STARTING STRING ONE WAY BALL BEARING STARTING AXLE STARTING AXLE STARTING AXLE STARTING STRING ONE WAY BALL BEARING HANDLE HANDLE HANDLE BUIFER HEAD WASHER SEAT ONE WAY BEARING SEAT SILICON EXHAUST GASKET BALL BEARING ROWT CARBURATOR "O" RING REAR BACK COVER CONNECTIVE SEAT DRIVE GEAR CONNECTIVE SEAT THRAD SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER CONNECTIVE SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CRANKSHAFT BALL BEARING REAR SCREW CYLINDER HEAD BOLT 4PCS WASHER GOAS, 1x7,5 FUEL NOZZLE WASHER O.6x4, 1x7,5 FUEL NOZZLE WASHER O.6x4, 1x7,5		Y NEEDLE VALVE "O" RING
EDDY SKRING STATTING STRING ONE WAY BALL BEARING STATTING AXLE STATTING PIN PRESSURE SPRING HANDLE FRESSURE SPRING HANDLE FRESSURE SPRING HANDLE FREAD WASHER SEAT ONE WAY BEARING SKAT SILLON EXHAUST GASKET BALL BEARING FRONT CARBURATOR "O" RING REAR BACK COVER CARBURATOR "O" RING REAR BACK COVER CARBURATOR "O" RING REAR BACK COVER CARBURETOR MAIN BODY STRING SEAT THROTTLE COVER THROTTLE COVER THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCHEW CYLINDER HEAD WASHER CYLINDER HEAD WASHER OLGA'STA'S FUEL WASHER OLGA'STA'S RASHER OLGA'STA'S		L STARTING UNIT
ONE WAY BALL BEARING STARTING AXLE STARTING AXLE STARTING AXLE STARTING AXLE BALE BULL START CRANKCASE COVER SE BUFFER HEAD WASHER SEAT ONE WAY BEARING SEAT SILLON EXHAUST GASKET BALL BEARING ROWT CARBURATOR "O" RING REAR BACK COVER CARBURATOR WAY BALL BEARING + SEAT THROTTLE COVER THROTTLE COVER THROTTLE NEEDLE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CYLINDER SLEVELPISTON BURN ROOM CYLINDER HEAD BOLT 4PCS WASHER GOSG, 1X,7,5 FUEL NOZZIE WASHER GOSG, 1X,7,5 FUEL NOZZIE WASHER GOSG, 1X,7,5 FUEL NOZZIE		SPRING ING STRING
STARTING AXLE STARTING AXLE STARTING PIN PRESSURE SPRING HANDLE HANDLE HANDLE BULL START CRANKCASE COVER SE BUFFER HEAD WASHER SEAT ONE WAY BEARING SEAT SILLON EXHAUST GASKET BALL BEARING FRONT CARBURATOR "O" RING REAR BACK COVER THREAD SEAT SILLON EXHAUST THREAD SEAT CARBURETOR MAIN BODY STRING SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER THROTTLE COVER THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCHEW CRANKSHAFT BALL BEARING REAR SCREW CYLINDER HEAD WASHER CYLINDER HEAD CYLINDER CONTRACTOR CYLINDER HEAD CYLINDER CONTRACTOR CYLINDER CONTRACTOR CYLINDER CONTRACTOR CYLINDER CONTRACTOR CYLINDER CONTRACTOR CY		/AY BALL BEARING
PRESSURE SPRING PRESSURE SPRING HANDLE HANDLE BULL START CRANKCASE COVER SE BUFFER HEAD WASHER SEAT ONE WAY BEARING SEAT SILLOON EXHAUST GASKET BALL BEARING FRONT CARBURATOR "O" RING REAR BACK COVER CARBURATOR "O" RING REAR BACK COVER CARBURETOR MAIN BODY STRING SEAT THROTTLE COVER CARBURETOR COMPLETELY (SLIDE CARBURETOR COMPLETELY (SLIDE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SUPPLY NEEDLE VALVE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CYLINDER HEAD WASHER CYLINDER HEAD		ING AXLE
HANDLE HANDLE HANDLE HANDLE BULL START CRANKCASE COVER SE BUFFER HEAD WASHER SEAT ONE WAY BEARING SEAT SILLON EXHAUST GASKET BALL BEARING FRONT CARBURATOR "O" RING REAR BACK COVER THREAD SEAT REAR BACK COVER CARBURETOR MAIN BODY STRING SEAT THROTTLE COVER CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SUPPLY NEEDLE VALVE THROTTLE NEEDLE CRANKSHAFT BALL BEARING REAR SUPPLY NEEDLE VALVE THROTTLE NEEDLE CRANKSHAFT BALL BEARING REAR SURW CRANKSHAFT BALL BEARING REAR SURW CRANKSHAFT BURN GUDGEON PIN CYLINDER HEAD BOLT 4PCS WASHER GOSG, 1x7,5 FUEL NOZZIE WASHER GOSG, 1x7,5 FUEL NOZZIE WASHER GOSG, 1x7,5 FUEL NOZZIE		ING PIN
BUFER HEAD WASHER SEAT ONE WAY BEARING SEAT SILLON EXHAUST GASKET BALL BEARING FRONT CARBURATOR "O" RING REAR GOVER THREAD SEAT THREAD SEAT CARBURETOR MAIN BODY STRING SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER CARBURETOR COMPLETELY (SLIDE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SUPPLY NEEDLE VALVE THROTTLE NEEDLE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CRANKSHAFT BURN TON GUDGGON PIN CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD BOLT 4PCS WASHER 0.054, 147, 5 FUEL NOZZIE WASHER 0.054, 147, 5 FUEL NOZZIE WASHER 0.054, 147, 5		SUKE SPRING F
BUFER HEAD WASHER SEAT ONE WAY BEARING SEAT SILLONE KAHAUS GASKET BALL BEARING FRONT CARBURATOR "O" RING REAR BACK COVER THREAD SEAT REAR BACK COVER CONNECTIVE SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER CARBURETOR MAIN BODY STRING SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCHEW CRANKSHAFT BALL BEARING REAR SCREW CRANKSHAFT BALL BEARING REAR SCREW CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD BOLT 4PCS WASHER 0.6x5, 1x7,5 FUEL NOZZIE WASHER 0.6x4, 1x7,5 FUEL NOZZIE WASHER 0.6x4, 1x7,5		VER
ONE WAY BEARING SEAL SILLONE KAHAUST GASKET BALL BEARING RONT CARBURATOR "O" RING REAR COVER THREAD SEAT REAR BACK COVER CONNECTIVE SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER THROTTLE COVER THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SUPPLY NEEDLE VALVE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD BOLT 4PCS WASHER GOSS, 1X,7,5 FUEL NOZZIE WASHER GOSS, 1X,7,5 FUEL NOZZIE WASHER GOSS, 1X,7,5 FUEL NOZZIE		R HEAD WASHER SEAT
BALL BEARING ROWT CARBURATOR "O" RING REAR COVER THREAD SEAT CONNECTIVE SEAT DRIVE GEAR CONNECTIVE GEAR CARBURETOR MAIN BODY STRING SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER THROTTLE COVER CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCHEW CRANKSHAFT BALL BEARING REAR SCREW CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD BOLT 4PCS WASHER GOSS, 1x7,5 FUEL NOZZLE WASHER GOSS, 1x7,5 FUEL NOZZLE		/AY BEAKING SEAI IN EXHALIST GASKET
CARBURATOR "O" RING REAR COVER THREAD SEAT REAR BACK COVER CONNECTIVE SEAT CONNECTIVE SEAT DRING SEAT CONNECTIVE SEAT THROTTLE COVER THROTTLE COVER THROTTLE NEEDLE CRANKGHAFT BALL BEARING REAR SUPPLY NEEDLE VALVE THROTTLE NEEDLE CRANKGHAFT BALL BEARING REAR SCREW CRANKGASE BLACK COLOUR PISTON GUDGEON PIN CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD WASHER CYLINDER HEAD CYLINDE		SEARING FRONT
REAR COVER THREAD SEAT REAR BACK COVER CONNECTIVE CESAT CONNECTIVE CESAT CARBURETOR MAIN BODY STRING SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER THROTTLE COVER THROTTLE NEEDLE CRANKCHAFT BALL BEARING REAR SCREW CRANKCASE BLACK COLOUR PISTON GUDGEON PIN CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD WASHER CYLINDER HEAD BOLT 4PCS WASHER 0.0x5, 1x7,5 FUEL NOZZI E WASHER 0.0x4, 1x7,5 FUEL NOZZI E		JRATOR "O" RING
I HREAD SEAT  REAR BACK COVER  CONNECTIVE SEAT  CARBURETOR MAIN BODY  STRING SEAT  ONE WAY BALL BERRING + SEAT  THROTTLE COVER  SUPPLY NEEDLE VALVE  THROTTLE NEEDLE  CRANKSHAFT  BALL BEARING REAR  SCREW  CRANKSHAFT  BALL BEARING REAR  SCREW  CYLINDER SIEVE/PISTON  BURN ROOM  CYLINDER HEAD WASHER  CYLINDER HEAD BOLT 4PCS  WASHER 0.0x5, 1x7,5  FUEL NOZZI E  WASHER 0.0x4, 1x7,5  FUEL NOZZI E  WASHER 0.0x4, 1x7,5		COVER
COMNECTIVE SEAT CONNECTIVE SEAT CONNECTIVE SEAT CARBURETOR MAIN BODY STRING SEAT ONE WAY BALL BERRING + SEAT THROTTLE COVER SUPPLY NEEDLE VALVE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CRANKCASE BLACK COLOUR PISTON GUDGEON PIN CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD WASHER CYLINDER HEAD WASHER CYLINDER HEAD WASHER CYLINDER HEAD BOLT 4 PCS WASHER 0.06x5, 1x7,5 FUEL NOZZI E WASHER 0.06x4, 1x7,5 FUEL NOZZI E WASHER 0.06x4, 1x7,5		AD SEAT
DRIVE GEAR CARBURETOR MAIN BODY STRING SEAT ONE WAY BALL BERRING + SEAT THROTTLE COVER SUPPLY NEEDLE VALVE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHART BALL BEARING REAR SCREW CRANKCASE BLACK COLOUR PISTON GLÜGEÖN PIN CYLINDER SLEVE/PISTON BURN ROÖM CYLINDER HEAD WASHER CYLINDER HEAD WASHER CYLINDER HEAD BOLT 4 PCS WASHER 0.0x5.1x7.5 FUEL NOZZI E WASHER 0.0x4.1x7.5		BACK COVER ECTIVE SEAT
CARBURETOR MAIN BODY STRING SEAT ONE WAY BALL BEARING + SEAT THROTTLE COVER SUPPLY NEEDLE VALVE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CRANKSHAFT BALL BEARING REAR SCREW CYLINDER SLEVE/PISTON GYLINDER HEAD WASHER CYLINDER HEAD WASHER CYLINDER HEAD WASHER CYLINDER HEAD BOLT 4PCS WASHER 0.0x5.1x7.5 FUEL NOZZI E WASHER 0.0x4.1x7.5		GEAR
SI HAING SEATI ONE WAY BALL BEARING + SEAT THROTTIE NEEDLE THROTTIE NEEDLE THROTTIE NEEDLE THROTTIE NEEDLE THROTTIE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHART BALL BEARING REAR SCRANKGASE BLACK COLOUR PISTON GUGGEON PIN CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD WASHER CYLINDER HEAD WASHER CYLINDER HEAD WASHER CYLINDER HEAD BOLT 4 PCS WASHER 0.06x5.1x7.5 FUEL NOZZLE WASHER 0.06x4.1x7.5		JRETOR MAIN BODY
THROTTIC COURT SUPPLY NEEDLE VALVE THROTTIC ENEEDLE THROTTIC ENEEDLE THROTTIC NEEDLE THROTTIC NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREN SCREN SCREN SCREN CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD WASHER CYLINDER HEAD WASHER CYLINDER HEAD BOLT 4PCS WASHER 0.6x5.1x7.5 FUEL NOZZLE WASHER 0.6x4.1x7.5		
SUPPLY NEEDLE VALVE THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CRANKCASE BLACK COLOUR PISTON GUDGEON PIN CYLINDER SLEEVE/PISTON BURN ROOM CYLINDER HEAD WASHER CYLINDER HEAD CY		+
THROTTIE NEEDLE THROTTIE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CRANKCASE BLACK COLOUR PISTON GUDGEON PIN CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD WASHER CYLINDER HEAD WASHER O.6x6, 1x7,5 FUEL NOZZI E WASHER O.6x4, 1x7,5		NEED
THROTTLE NEEDLE CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CRANKCASE BLACK COLOUR PISTON GUDGEON PIN CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD WASHER CYLINDER HEAD CYLINDER HEAD CYLINDER HEAD CYLINDER HEAD CYLINDER HEAD CYLINDER HEAD BOLT 4PCS WASHER 0.6x5, 1x7,5 FUEL NOZZLE WASHER 0.6x4, 1x7,5		E NELL
CARBURETOR COMPLETELY (SLIDE CRANKSHAFT BALL BEARING REAR SCREW CRANKCASE BLACK COLOUR PISTON GUDGEON PIN CYLINDER SLEVE/PISTON BURN ROOM CYLINDER HEAD WASHER CYLINDER HEAD BOLT 4PCS WASHER 0.6x5, 1x7,5 FUEL NOZZI E WASHER 0.6x4, 1x7,5		TTLE NEEDLE
CRANKSHAFI BALL BEARING REAR SCREW CRANKCASE BLACK COL CRANKCASE BLACK COL PISTON GUDGEON PIN CYLINDER SLEEVE/PIST BURN ROOM CYLINDER HEAD WASHE CYLINDER HEAD CYLINDER HEAD CYLINDER HEAD CYLINDER HEAD CYLINDER HEAD WASHER O.6x5, 1x7,5 FUEL NOZZI E WASHER O.6x4, 1x7,5 WASHER O.6x4, 1x7,5		
SCRE WASHING THEN SCREEN CRANKCASE BLACK COL PISTON GUDGEON PIN CYLINDER SLEEVE/PIST BURN ROOM CYLINDER HEAD WASHER O.C. INDER HEAD BOLT 4 WASHER O.C. INTER HEAD BOLT 5 FUEL NOZZI E WASHER O.C. INT. 5 FUEL NOZZI E WASHER O.C. INT. 5 FUEL NOZZI E		(SHAFI
CRANKCASE BLACK COL PISTON GUDGEON PIN CYLINDER SLEEVE/PIST BURN ROOM CYLINDER HEAD WASHE CYLINDER HEAD BOLT 4 WASHER Q.E.S. 1.7.5 FUEL NOZZLE WASHER Q.E.S. 1.7.5 FUEL NOZZLE		V
PISTON GUDGEON PIN CYLINDER SLEEVE/PIST BURN ROOM CYLINDER HEAD WASHE CYLINDER HEAD WASHE CYLINDER HEAD BOLT 4 WASHER 0.6x5.1x7.5 FUEL NOZZLE WASHER 0.6x4.1x7.5		BLACK COL
		N GUDGEON PIN
		DER SLEEVE/PISTON
		NOOM DER HEAD WASHER
013 024 025 029		DER HEAD
025 025 029		DER HEAD BOLT 4PCS
FUEL NOZZLE WASHER 0.6x4,1x7	024	ER 0,6x5,1x7,5
WASHER 0.6x4.1x7.		

# THE PROTECH SIDE EXHAUST CAR ENGINE INSTRUCTIONS RECOMMENDED BREAK-IN PROCEDURE

- Please note that the carburetor low-end adjustment needle valve situated on the the side of the carburetor has already been factory preset. Please do not attempt to adjust it at this stage.
- To initially start the engine, the main needle valve must be opened to rich setting. To do this, turn the needle in a clockwise direction until it is fully closed and then open it up five complete turns in an anti clockwise direction.
- · We recommend that you run the engine at this setting for at least the first six tanks full of fuel
- At this early stage, you may find that because of the rich setting, the engine may initially develop a hydraulic lock because of the excess fuel and be impossible to turn over with the pull starter.
- Whenever this happens, it is necessary to take the glow plug out and turn the car upside down and vigorously spin the engine over with approximately pulls on 10 the starter.
- You will notice a spray of unburnt fuel coming out of the plug hole, which will clear the engine. Whilst the glow plug is out, it is a good idea to connect it to your starting battery and check that the element is showing a healthy red glow. If it is not, your battery or starting system has lost power or the glow plug burnt out.
- Having corrected either fault, replace the glow plug and go through the initial starting period again with the same rich needle setting.
- After six tanks full of fuel, we recommend that you gradually turn the main needle valve inwards in a clockwise direction by
  quarter of a turn to gradually increase the engine speed, but still with a protective rich smoky exhaust.
- Do not at any time run the motor flat out and certainly not more than half throttle with the car wheels off the ground. You must not run the engine in with the car sitting on "blocks" with wheels off the ground.
- If while the engine is running, there is no smoky exhaust evident, then the setting is too lean and because of the heat and lack of oil present, the motor can be potentially damaged.
- When you feel that you have mastered the starting procedure and the engine is run in, you can adjust the low-end needle to improve idling and quick engine response to full throttle.
- The low-end needle should be turned cautiously only by 1/8 turn at a time. A clockwise movement will produce a leaner mixture which may be necessary if the motor hesitates and blows exhaust smoke when move to full throttle. Conversely, if when switched to full throttle from idle, the engine cuts abruptly, then it is too lean and the low end should be rotated 1/8 turn in an anti clockwise direction.

### **AIR FILTERS**

Always use a high quality air filter and check and replace it regularly. Dust and dirt will quickly reduce the performance of your engine and shorten its life. Foam air filters are inexpensive; however if you are using a paper type, please note that the paper can get full of dust restricting the air flow and causing the engine to run rich.

### **FUEL**

Always use a high quality model aircraft of car fuel, which contains at least 20% oil. We recommend Daytona fuel, which gives maximum protection and should be the part of any fuel you use. Nitromethane helps to increase idling and power and whilst PROTECH engines will run on high percentages of nitro, we recommend that you don't run on any more than a total of 15% nitro. For general sport operation, a mix of 20% castor, 5% nitromethane and 75% methanol will give a good performance.

## WHY THE ENGINE WON'T START

- Fuel flow into the carburetor is blocked. Unscrew the needle valve and blow air into the carburetor.
- The tank may have a blockage ... check it carefully.
- The fuel line from the tank to themotor may be split or have a small pin hole causing air bubbles ... replace it.
- The glow plug may not be operating ... check your battery or replace the plug.
- The fuel filter is clogged up ... replace it.
- The fuel line has slipped off the carburetor or tank.
- · You are using the wrong type of fuel.
- · The muffler is loose.
- The glow plug connector or lead from the starting battery has a fault ... check it carefully.
- The engine has no compression ... check the head screws and perhaps the cylinder & piston has been scored with dirt.

EC-DECLARATION OF CONFORMITY FOR MACHINERY (Directive 89/392/EEC, Annex II, sub. A.)

PROTECH® for the following products

engine for R/C models

type: 12SX

- are in conformity with the provisions of the Machinery (Directive 89/392/EWG), as amended, and with national implementing legislation and furthermore declares that:

- following (parts/clauses of) harmonized standards have been applied: EN-292-1 / EN-292-2

Herentals, 13.08.2001

Stefan Engelen

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