WSM

WORKSHOP MANUAL
TRACTOR

STV32,STV36,STV40

Kubota

KiSC issued 04, 2006 A

MidWestTech | Kubota STV32, STV36, STV40 Tractor Service Manual | Publication 9Y011-13041

Order the manual at mid-west-tech.com >

CONTENTS

1. TRACTOR IDENTIFICATION G-1
2. GENERAL PRECAUTION G-2
3. HANDLING PRECAUTIONS FOR ELECTRICAL PARTS AND WIRING G-3
[1] WIRING G-3
[2] BATTERY G-5
[3] FUSE G-5
[4] CONNECTOR G-6
[5] HANDLING OF CIRCUIT TESTER G-7
4. LUBRICANTS, FUEL AND COOLANT G-8
5. TIGHTENING TORQUES G-9
[1] GENERAL USE SCREWS, BOLTS AND NUTS G-9
[2] STUD BOLTS G-9
6. MAINTENANCE CHECK LIST G-10
7. CHECK AND MAINTENANCE G-12
[1] DAILY CHECK G-12
[2] CHECK POINTS OF INITIAL 50 HOURS G-13
[3] CHECK POINTS OF EVERY 50 HOURS G-18
[4] CHECK POINTS OF EVERY 100 HOURS G-20
[5] CHECK POINTS OF EVERY 200 HOURS G-27
[6] CHECK POINTS OF EVERY 400 HOURS G-29
[7] CHECK POINTS OF EVERY 600 HOURS G-30
[8] CHECK POINTS OF EVERY 800 HOURS G-30
[9] CHECK POINTS OF EVERY 1 YEAR G-30
[10] CHECK POINTS OF EVERY 2 YEARS G-30
[11] OTHERS G-33
8. SPECIAL TOOLS G-36
[1] SPECIAL TOOLS FOR ENGINE G-36
[2] SPECIAL TOOLS FOR TRACTOR G-42
9. TIRES G-47
[1] TIRE PRESSURE G-47
[2] TREAD G-48
(1) Front Wheels G-48
(2) Rear Wheels G-49
[3] TIRE LIQUID INJECTION G-50
10. IMPLEMENT LIMITATIONS G-52

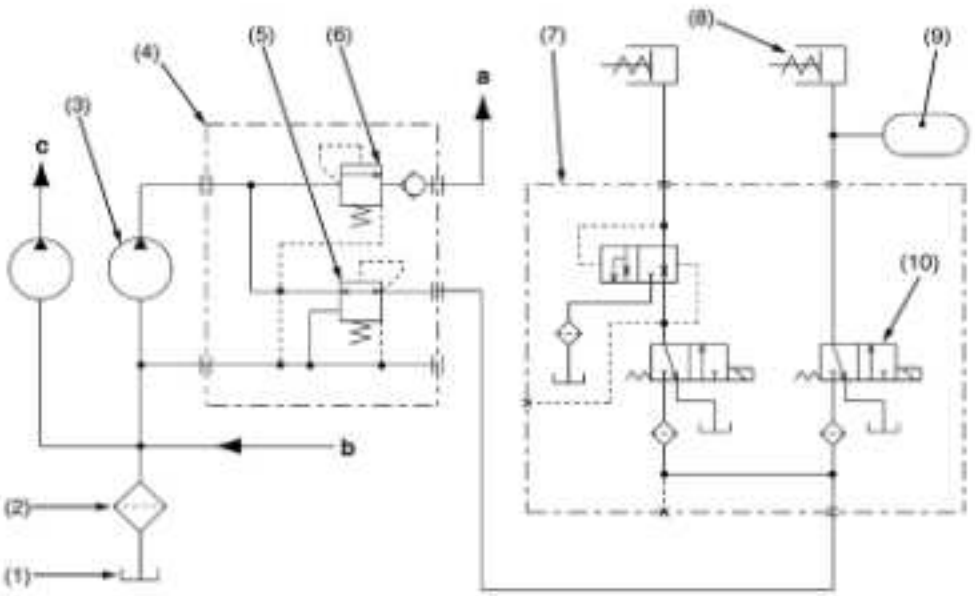
KiSC issued 04, 2006 A

MidWestTech | Kubota STV32, STV36, STV40 Tractor Service Manual | Publication 9Y011-... Order the manual at mid-west-tech.com >

3. POWER TRAIN FOR PTO SYSTEM

[1] INDEPENDENT PTO SYSTEM

(1) Hydraulic Oil Flow



(1) Transmission Case
(2) Oil Filter
(3) Hydraulic Pump (for Power Steering)
(4) Regulator Valve
(5) Pressure Reducing Valve
(6) Regulating Valve
(7) Bi-speed Valve
(8) Hydraulic Clutch (for PTO)
(9) Accumulator
(10) Solenoid valve (for PTO)

a : To Steering Controller
b : From Oil Cooler
c : To 3P Hydraulic System

3TGAAAC3P112B

This tractor is equipped with the independent PTO system. The hydraulic circuit is as shown above.

The oil from the hydraulic pump (3) is adjusted with the regulator valve (4) to the pressure of 18.5 kgf/cm^2, and enters the bi-speed valve (7). The solenoid valve (10), which is built in the bi-speed valve (7) and operated by the PTO clutch control switch, opens and shuts the oil circuit to the hydraulic clutch (8).

■ NOTE
- **Refer to the "8. HYDRAULIC SYSTEM" section for the "Regulator Valve" and "Bi-speed Valve" in detail.**

0000007777E

MidWestTech | Kubota STV32, STV36, STV40 Tractor Service Manual | Publication 9Y011-... Order the manual at mid-west-tech.com >

2. SERVICING SPECIFICATIONS

Item		Factory Specification	Allowable Limit
Front Wheel Alignment	Toe-in	2.0 to 8.0 mm 0.078 to 0.315 in.	—
Front Axle	Rocking Force	49.0 to 117.7 N 5.0 to 12.0 kgf 11.0 to 26.5 lbs	—
Front Axle Case Bosses to Bracket Bushings	Clearance	0.030 to 0.150 mm 0.0012 to 0.0059 in.	0.25 mm 0.0098 in.
	Front Axle Case Bosses (O.D.)	61.940 to 61.970 mm 2.4386 to 2.4398 in.	—
	Bracket Bushing (I.D.)	62.000 to 62.090 mm 2.44094 to 2.4445 in.	—
Differential Case to Differential Side Gear	Clearance	0.040 to 0.082 mm 0.0016 to 0.0032 in.	0.20 mm 0.0079 in.
	Differential Case Cover (I.D.)	28.000 to 28.021 mm 1.1024 to 1.1032 in.	—
	Differential Side Gear (O.D.)	27.939 to 27.960 mm 1.1000 to 1.1008 in.	—
Differential Pinion Shaft to Differential Pinion	Clearance	0.048 to 0.084 mm 0.0019 to 0.0033 in.	0.20 mm 0.0079 in.
	Differential Pinion Shaft (O.D.)	10.966 to 10.984 mm 0.4317 to 0.4324 in.	—
	Differential Pinion (I.D.)	11.032 to 11.050 mm 0.4343 to 0.4350 in.	—
Differential Pinion to Differential Side Gear	Backlash	0.10 to 0.30 mm 0.004 to 0.012 in.	—
Spiral Bevel Pinion Shaft (Pinion Shaft Only)	Turning Force	58.8 to 78.4 N 6.0 to 8.0 kgf 13.2 to 17.6 lbs	—
Spiral Bevel Pinion Shaft to Spiral Bevel Gear	Backlash	0.10 to 0.30 mm 0.004 to 0.012 in.	—
11T Bevel Gear to 16T Bevel Gear	Backlash	0.15 to 0.35 mm 0.0059 to 0.0138 in.	—
7T Pinion Shaft to 41T Bevel Gear	Backlash	0.15 to 0.35 mm 0.0059 to 0.0138 in.	—

0000007620E

MidWestTech | Kubota STV32, STV36, STV40 Tractor Service Manual | Publication 9Y011-... Order the manual at mid-west-tech.com >

1. TROUBLESHOOTING

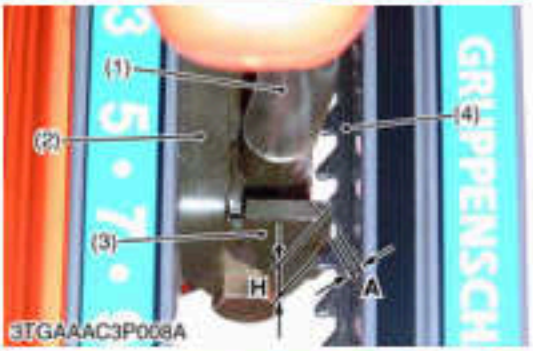
Symptom	Probable Cause	Solution	Reference Page
Implement Does Not Rises (Not Noise)	● Control linkage improperly adjusted	Adjust	8-S13
	● Control linkage improperly assembled or damaged	Repair or replace	8-M10
	● Position control valve malfunctioning	Repair or replace	8-S20, 21
	● Relief valve spring weaken or broken	Replace	8-S14
	● Hydraulic piston O-ring, cylinder damaged	Replace	8-S21
	● Auxiliary control valve malfunctioning	Repair or replace	8-S24
Implement Does Not Rises (Noise)	● Transmission fluid improper or insufficient	Change or replenish	G-8
	● Oil filter clogged	Replace	G-16
	● Suction pipe loosen or broken	Repair or replace	—
	● Suction pipe O-ring damaged	Replace	—
	● Relief valve setting pressure too low	Adjust	8-S14
	● Hydraulic pump malfunctioning	Repair or replace	8-S8
Implement Does Not Reach Maximum Height	● Position control feedback rod improperly adjusted	Adjust	8-S13
	● Top link length improperly adjusted	Adjust	—
	● Hydraulic arm shaft, hydraulic arm, lift arm improperly assembled	Adjust	8-S23
	● 3 point link improperly set	Adjust	—
Implement Drops by Weight	● Hydraulic cylinder worn or damaged	Replace	8-S27
	● Hydraulic piston and O-ring worn or damaged	Replace	8-S21
	● Lowering speed adjusting valve damaged	Replace	8-S22
	● Position control valve malfunctioning	Replace	8-S20
Implement Hunts (Moves Up and Down)	● Position control valve malfunctioning	Replace	8-S20
Oil Temperature Increases Rapidly	● Relief valve operating	Adjust	8-S14
	● Hydraulic pump leak or damaged	Replace or repair	8-S8
	● Oil leaks from valves	Replace or repair	—
	● Gear or bearing damaged in the transmission case	Replace	—

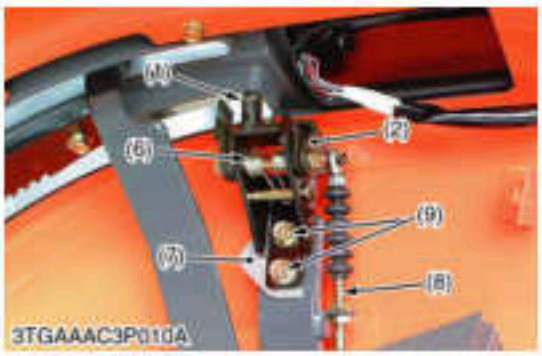
0000007801E

KiSC issued 04, 2006 A

MidWestTech | Kubota STV32, STV36, STV40 Tractor Service Manual | Publication 9Y011-... Order the manual at mid-west-tech.com >







1) Lever Setting Position (Cruise Control)

1. Engage the cruise control lever (1).
2. Confirm the release lever (2) touches the cruise control lever (1) by the spring (6), and the cruise control lever (1) touches the stopper (5).
3. When not becoming like the above mentioned, check the release wire (8) and damage of the spring (6). (See "Release Wire".)
4. Check the clearance **A** between the claw (3) and lever guide (4).
5. Check the projection height **H** of the claw (3) from the lever guide (4).
6. If the clearance **A** is not within the factory specifications, remove the left rear wheel and the fender cover, and adjust it with the shim (7).
7. If the projection height **H** is not within the factory specifications, loosen the screws (9) and move the cruise lever assembly.

Clearance **A** between the claw and lever guide	Factory spec.	0 to 1 mm 0 to 0.039 in.
Projection height **H** from the lever guide		More than 2 mm (0.079 in.)

(Reference)

- Thickness of the shim (7): 1.0 mm (0.039 in.)

(1) Cruise Control Lever
(2) Release Lever
(3) Claw
(4) Lever Guide
(5) Stopper
(6) Spring
(7) Shim
(8) Release Wire
(9) Screw

A : Clearance between the claw and lever guide
H : Projection height from the lever guide

0000007525E



2) Release Wire (Cruise Control)

1. Remove the left rear wheel and the fender cover.
2. Engage the cruise control lever (1).
3. Check the inner wire in the release wire (5) does not slacken.
4. Check the release lever (6) touches the cruise control lever (1) by the spring (3), and the cruise control lever (1) touches the stopper (2).
5. When not becoming like the above-mentioned, adjust with the adjusting nut (4).

(Reference)

- If the inner wire is too tight, the cruise control lever (1) does not touch the stopper (2).

(1) Cruise Control Lever
(2) Stopper
(3) Spring
(4) Adjusting Nut
(5) Release Wire
(6) Release Lever

0000007526E

MidWestTech | Kubota STV32, STV36, STV40 Tractor Service Manual | Publication 9Y011-... Order the manual at mid-west-tech.com >







Parking Brake Lever Free Travel

1. Support the rear axle with the disassembling stand to separate the rear wheels from the ground.
2. Shift the range gear shift lever to the neutral position, and disengage the front wheel drive lever.
3. Raise the parking brake lever (1) until the ratchet sound is heard once.
4. Check right and left rear wheels. Right and left rear wheels should be free.
5. Next, raise the parking brake lever (1) until the ratchet sound is heard twice.
6. Check right and left rear wheels. Right and left rear wheels should be locked.
7. If it is not, adjust with the parking brake rod 2 (2).

Parking brake lever free travel	Factory spec.	The brake works when the lever is raised until the ratchet sound is heard twice

■ **IMPORTANT**

- **Check the brake pedal free travel after adjusting the parking brake.**

(1) Parking Brake Lever (2) Parking Brake Rod 2 (Left)

0000007610E

[2] DISASSEMBLING AND ASSEMBLING

Removing Brake Pedal

Refer to **"PREPARATION"** section of **3. TRANSMISSION** (3-S28).

0000007611E

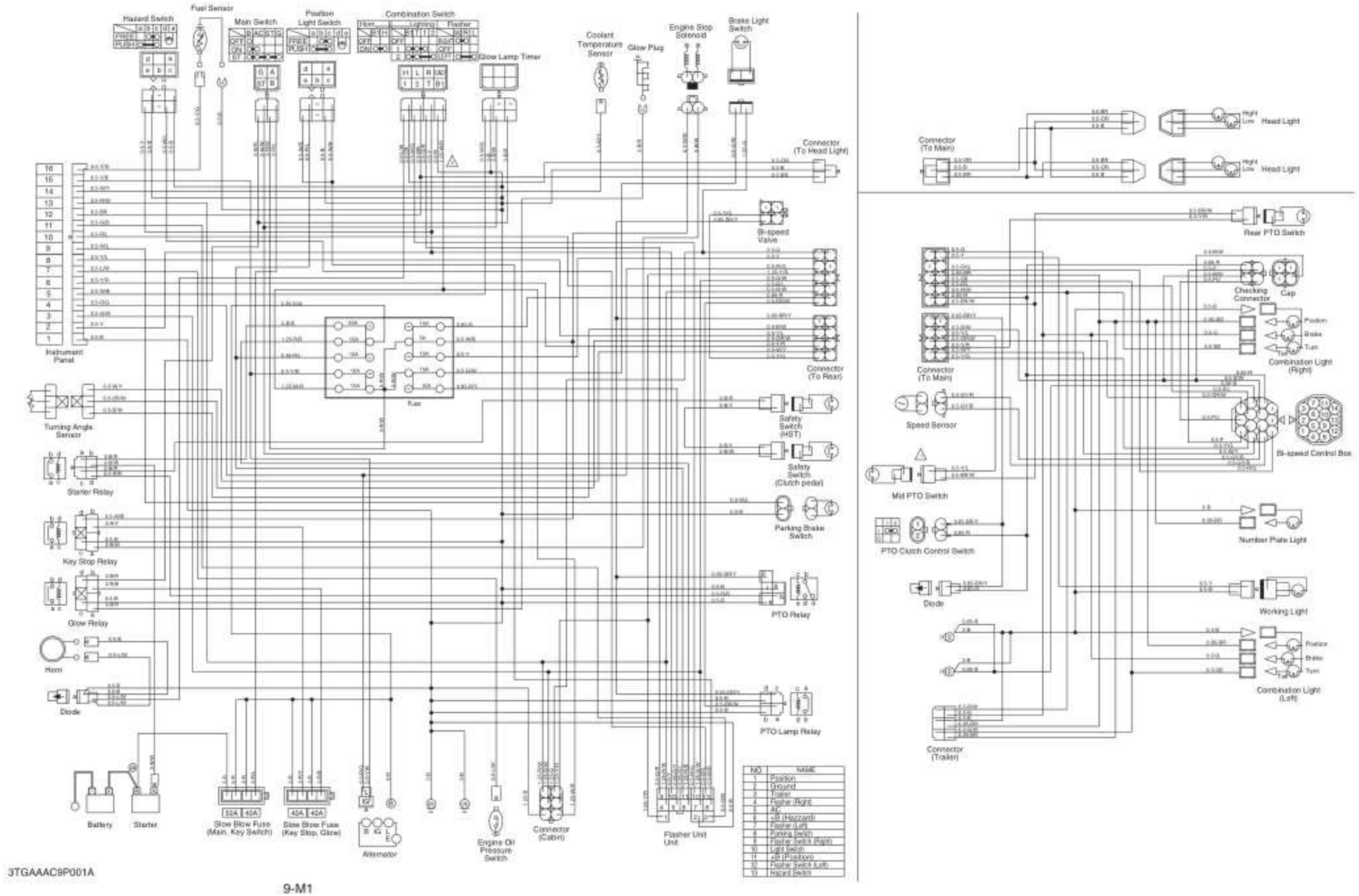
Separating Brake (Rear Axle)

Refer to **"PREPARATION"** section of **3. TRANSMISSION** (3-S33).

0000007612E

MidWestTech | Kubota STV32, STV36, STV40 Tractor Service Manual | Publication 9Y011-... Order the manual at mid-west-tech.com >

1. WIRING DIAGRAM



3TGAAAC9P001A

9-M1

KiSC issued 04, 2006 A

Order the manual at mid-west-tech.com >