

NAUTFLEX®

SECTION 1

LOCATION OF CONTROL

- 1.1 Allow adequate clearance for hand lever swing (forward and reverse positions). See Figure 1 for control dimensions.
- 1.2 Allow adequate clearance under the console for the cables. Refer to Figure 1.
- 1.3 After a suitable location for the control is determined, use the installation template provided, and cut & drill the mounting holes required.

SECTION 2

CABLE MEASUREMENT

- 2.1 Measure from the control head position along an unobstructed path to the shift and throttle connections.
- 2.2 Cable lengths are measured from end to end. When a measurement is in feet and inches, specify the next whole foot.

NOTE: FOR OUTBOARD ENGINES, ADD FOUR(4) FEET TO THE LENGTH OF THE CABLE FOR A LOOP TO ALLOW FOR ENGINE SWING.

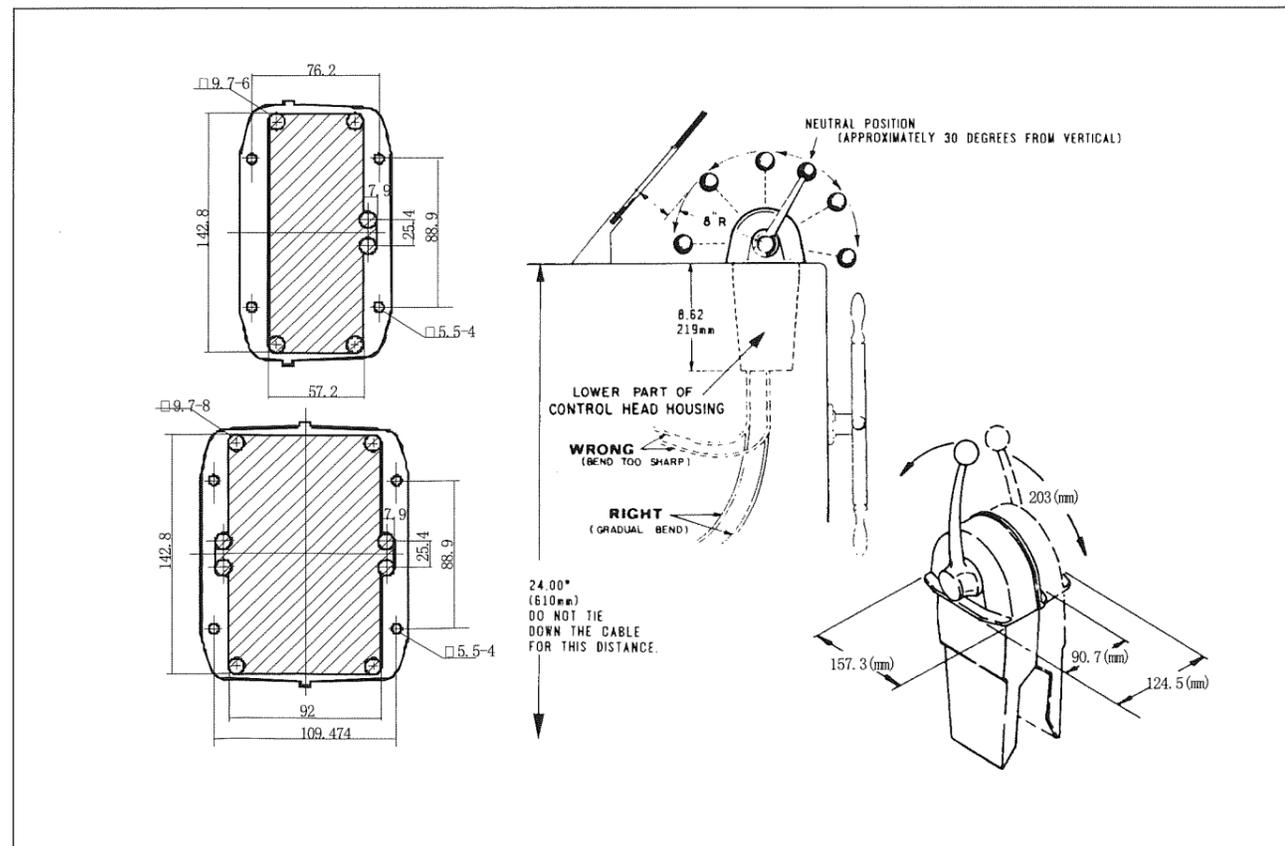


Figure 1 Control Measurements

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SECTION 3

CABLE ROUTING

- 3.1 The Cable runs should minimize the number of bends and avoid any sharp bends. Make no bends in cables less than 200mm.
- 3.2 The cable should be supported by using cable hangers or by running them through straight sections of conduit for long runs.

CAUTION: DO NOT USE CABLE HANGER OR CLAMPS WHICH MAY CRUSH OR STRESS THE CABLES IN ANYWAY. DOING SO MAY IMPAIR THE FUNCTION OF THE CABLE.

SECTION 4

SHIFT CABLE CONNECTION – CONTROL END

NOTE: TO DETERMINE THE CORRECT CONTROL CONFIGURATION FOR INBOARD ENGINES EQUIPPED WITH HYDRAULIC CLUTCHES, IT IS FIRST NECESSARY TO DETERMINE WHETHER THE CONTROL CABLES MUST EXERT A “PUSH” OR “PULL” ACTION AT THE TRANSMISSION LEVER TO ENGAGE FORWARD GEAR, AND A “PUSH” OR “PULL” ACTION AT THE CARBURETOR LEVER TO OPEN THE THROTTLE.

The shift arm is factory-set for standard travel (center notch). Refer to Figure 2.

A. SHIFT STROKE ADJUSTMENT

If you find it necessary to change this position, proceed as follows:

1. Loosen the two(2) hex head cap screws so the shift arm can be lifted to clear the notches.
2. Reposition the shift arm to the desired stroke. Be sure the notches are properly engaged before tightening the screws. Refer to Figure 2.
3. Tighten the hex head screws to 10N.m

NOTE: FOR OPPOSITE CABLE ACTION, SHIFT ARM AND NEUTRAL SAFETY SWITCH SHOULD BE A MIRROR IMAGE OF THAT WHICH IS SHOWN.

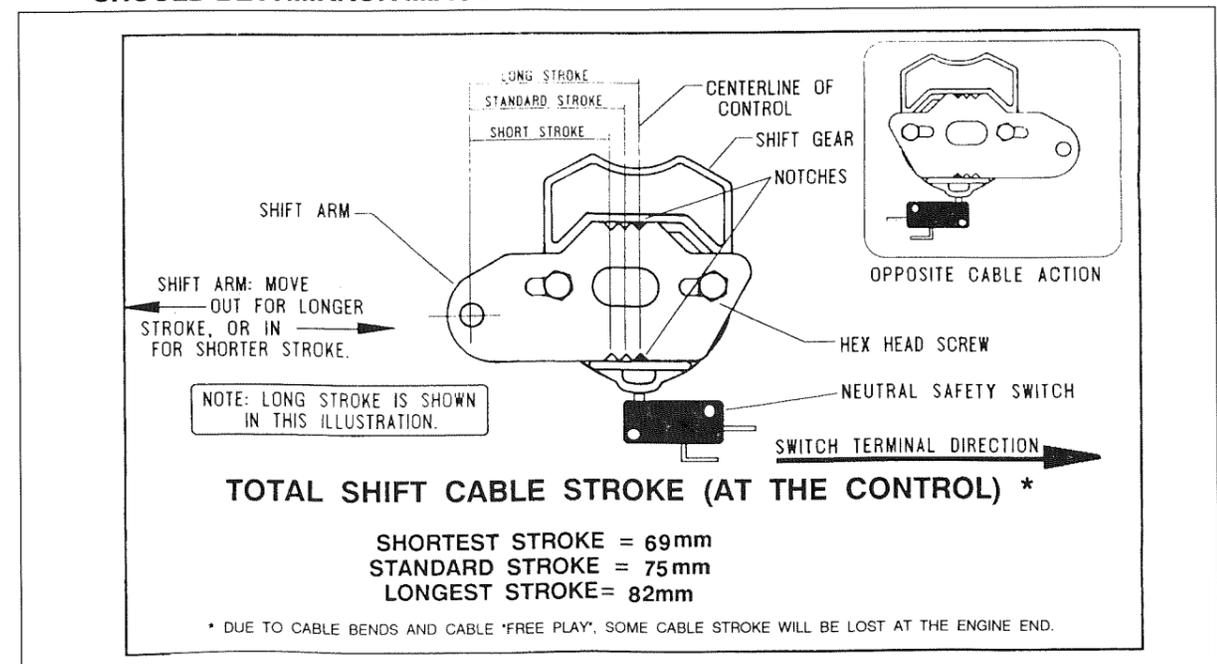


Figure 2

B. SHIFT CABLE CONNECTION

1. Attach the pivot to the end of the shift cable, as shown in Figure 3.
2. Feed the cable behind the shift arm and insert the pivot into the hole. Secure the pivot in place with the cotter pin included.
3. Attach the cable hub to the bottom of the housing at the tapped hole. Make sure the groove in the cable hub engages the cable clamp.

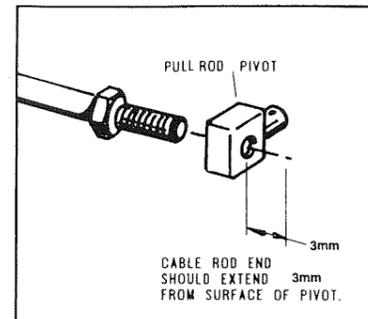


Figure 3 Cable Termination Connection

SECTION 5

THROTTLE CABLE CONNECTION – CONTROL END

Refer to the ENGINE APPLICATION GUIDE, SECTION 4, for the proper cable action to suit your engine.

The throttle lever may be factory-set for “push” to open throttle. Refer to Figure 4. If you find it necessary to change to “pull” to open throttle, proceed as follows:

1. Remove the hand lever.
2. Remove the throttle cable, if attached.
3. Remove the swivel bracket.
4. Remove the two(2) hex head screws at the link assembly, and remove the link. Make sure the shift arm does not change notch positions.
5. Push in on the throttle arm toward the housing and rotate it 180 degrees until it snaps back into place.
6. Attach the link assembly in the desired position using the hex head screws. Tighten the screws.
7. Attach the swivel bracket in the proper hole. See Figures 4 and 5 for proper location.
8. Reinstall the cable and hand lever.

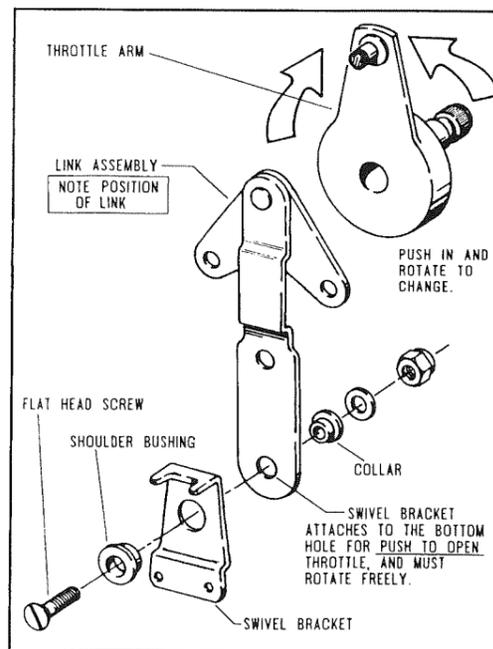


Figure 4 Push-to-open configuration

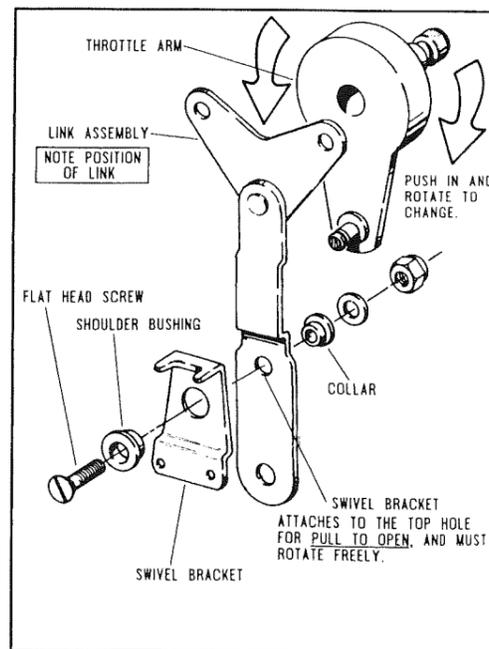


Figure 5 Pull-to-open configuration

SECTION 6

THROTTLE CABLE CONNECTION – ENGINE END

CAUTION: THE THROTTLE CABLE MUST BE DISCONNECTED FROM THE MOTOR BEFORE MAKING MOTOR IDLE ADJUSTMENTS. ADJUSTMENT OF THE MOTOR IDLE WHILE THE THROTTLE CABLE IS STILL CONNECTED TO THE MOTOR MAY CAUSE A JAMMING ACTION AGAINST THE IDLE STOP. AS A RESULT, THE CONTROL MAY NOT FUNCTION PROPERLY, AND DAMAGE TO THE CONTROL, THE CABLE AND/OR MOTOR COULD RESULT.

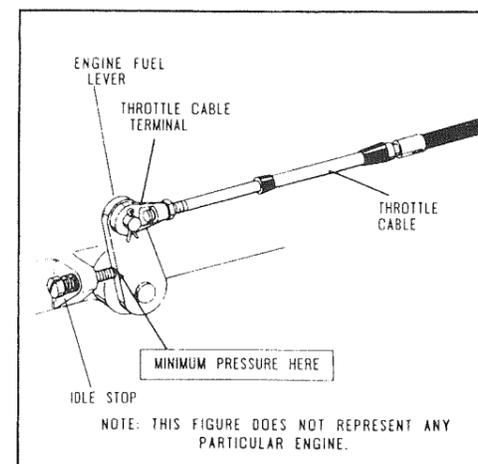


Figure 6 Throttle Connection

6.1 Make sure the control is in NEUTRAL DETENT.

6.2 The fuel lever should rest lightly against the Idle Stop on the carburetor.

6.3 Connect the throttle cable to the fuel lever.

6.4 At NEUTRAL DETENT, pull out the hand lever hub and move the lever PAST the forward range. Return to NEUTRAL and the hand lever should snap back into place.

NOTE: PLACE “FORWARD-REVERSE” DECAL ON HOUSING, OPPOSITE THE NEUTRAL POSITION OF THE HAND LEVER.

SECTION 7 (Option) NEUTRAL SAFETY SWITCH

The YK9 control is provided with a neutral safety switch as option. This switch prevents the engine from starting in gear.

USE A BATTERY-POWERED TEST LIGHT OR TEST METER TO CHECK CONTINUITY.

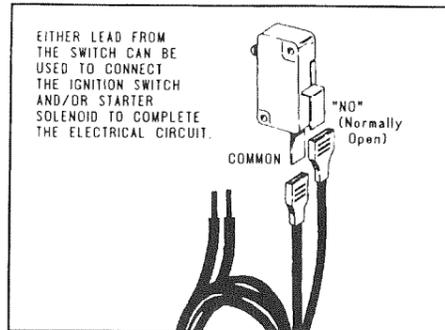


Figure 7 Neutral Safety Switch

With the control in NEUTRAL, connect one wire of the tester to the common terminal, and one wire to the "NO"(Normally Open) terminal. The test light MUST light.

Connect the neutral safety switch between the ignition switch(start lead) and the starter solenoid.

CAUTION: CHECK TO MAKE SURE THAT THERE IS ELECTRICAL CONTINUITY ONLY WHEN THE CONTROL IS IN NEUTRAL (NEUTRAL SAFETY SWITCH IS IN CLOSED CIRCUIT). WHEN THE CONTROL IS IN GEAR(WORKING STATE), THERE MUST NOT BE ANY ELECTRICAL CONTINUITY (NEUTRAL SAFETY SWITCH IS OPEN).

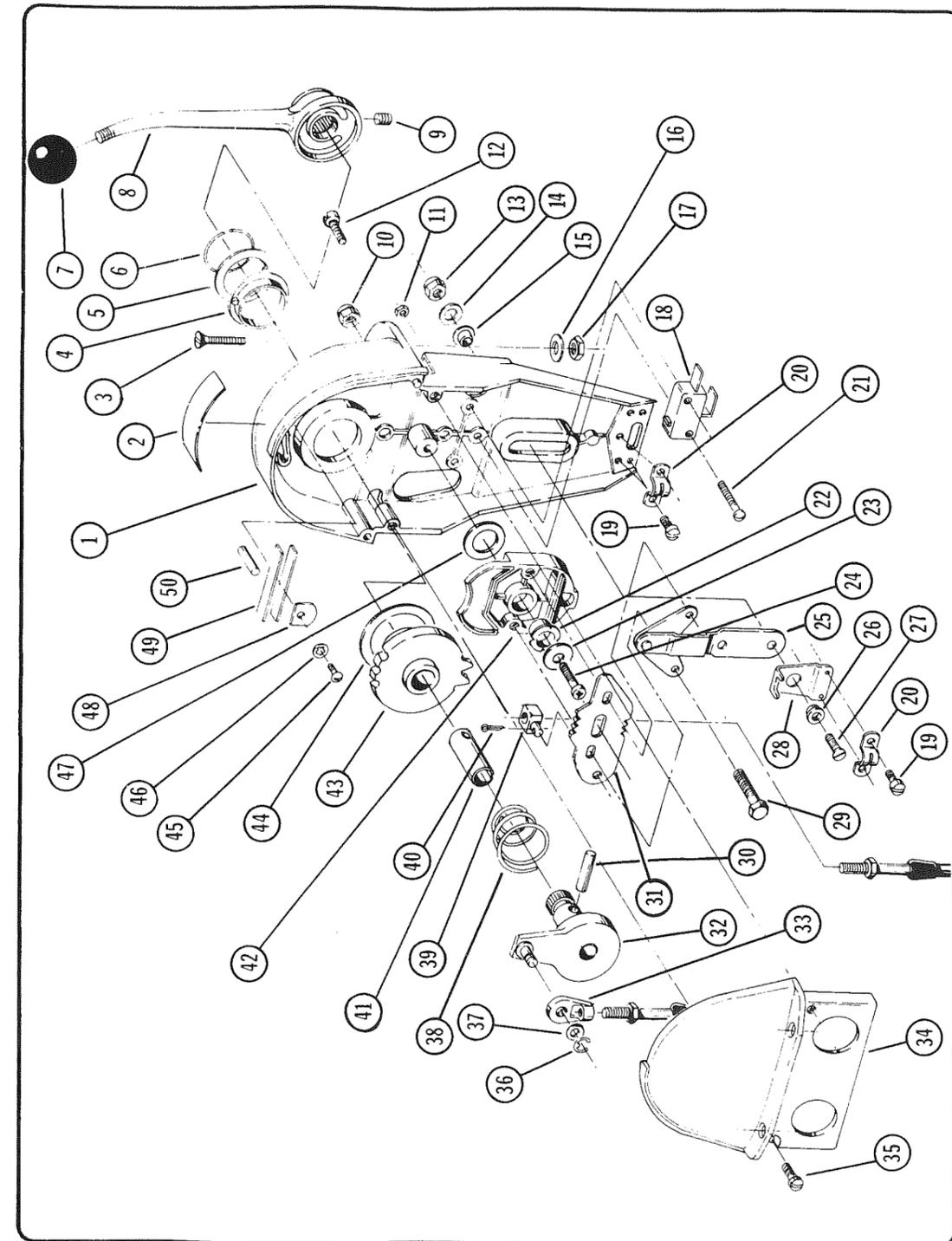
SECTION 8 MAINTENANCE AND CORROSION PROTECTION

For maximum protection, especially in a salt water environment, the control head should be washed with fresh water and waxed regularly.

Periodically check the control head mechanism for loose fasteners and signs of wear on moving parts. Keep these moving parts well lubricated with a moisture-displacing lubricant to ensure good functioning.

Periodically check the cables and engine connections for signs of wear and corrosion. Replace if necessary.

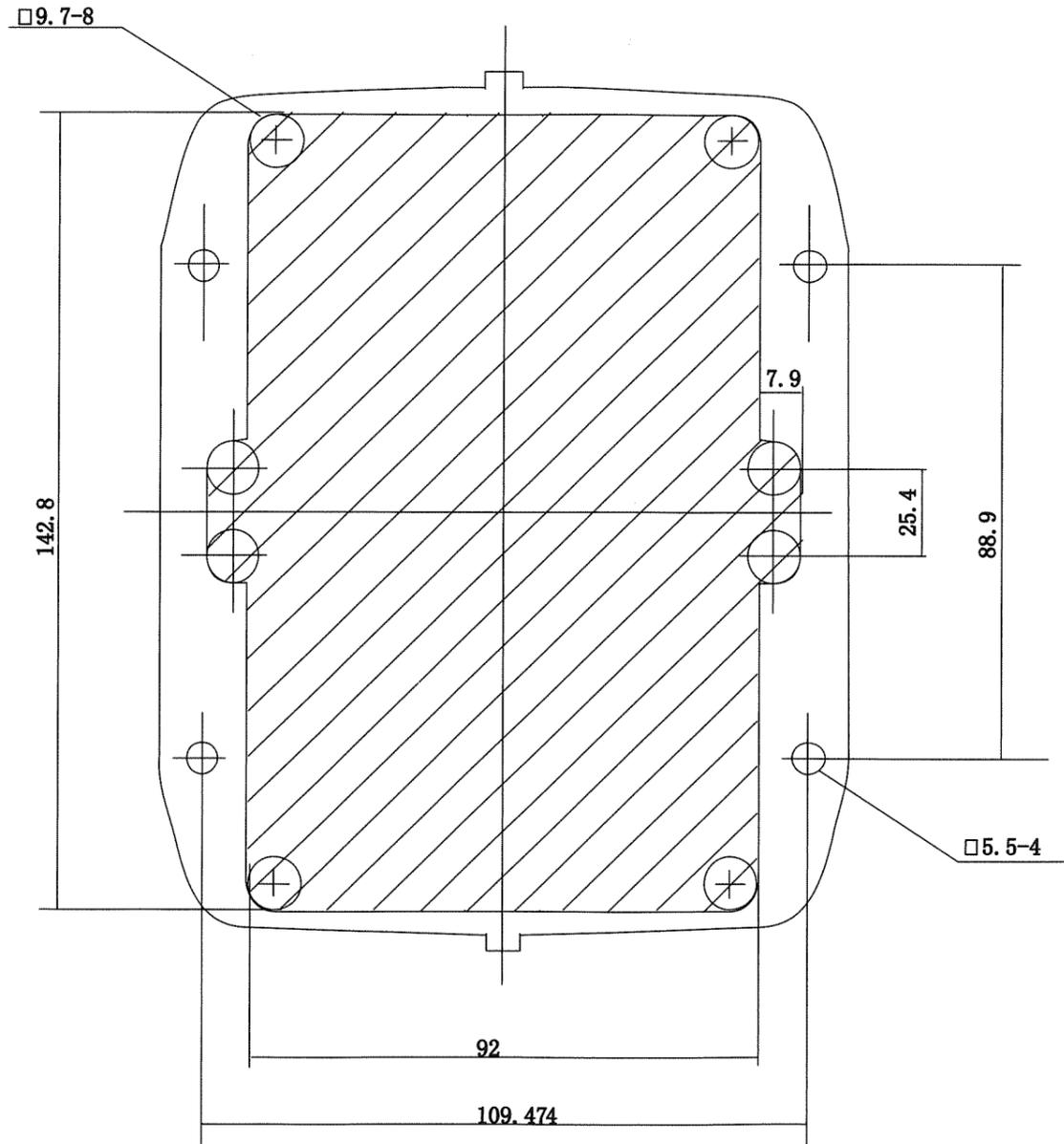
EXPLODED VIEW OF YK9 CONTROL



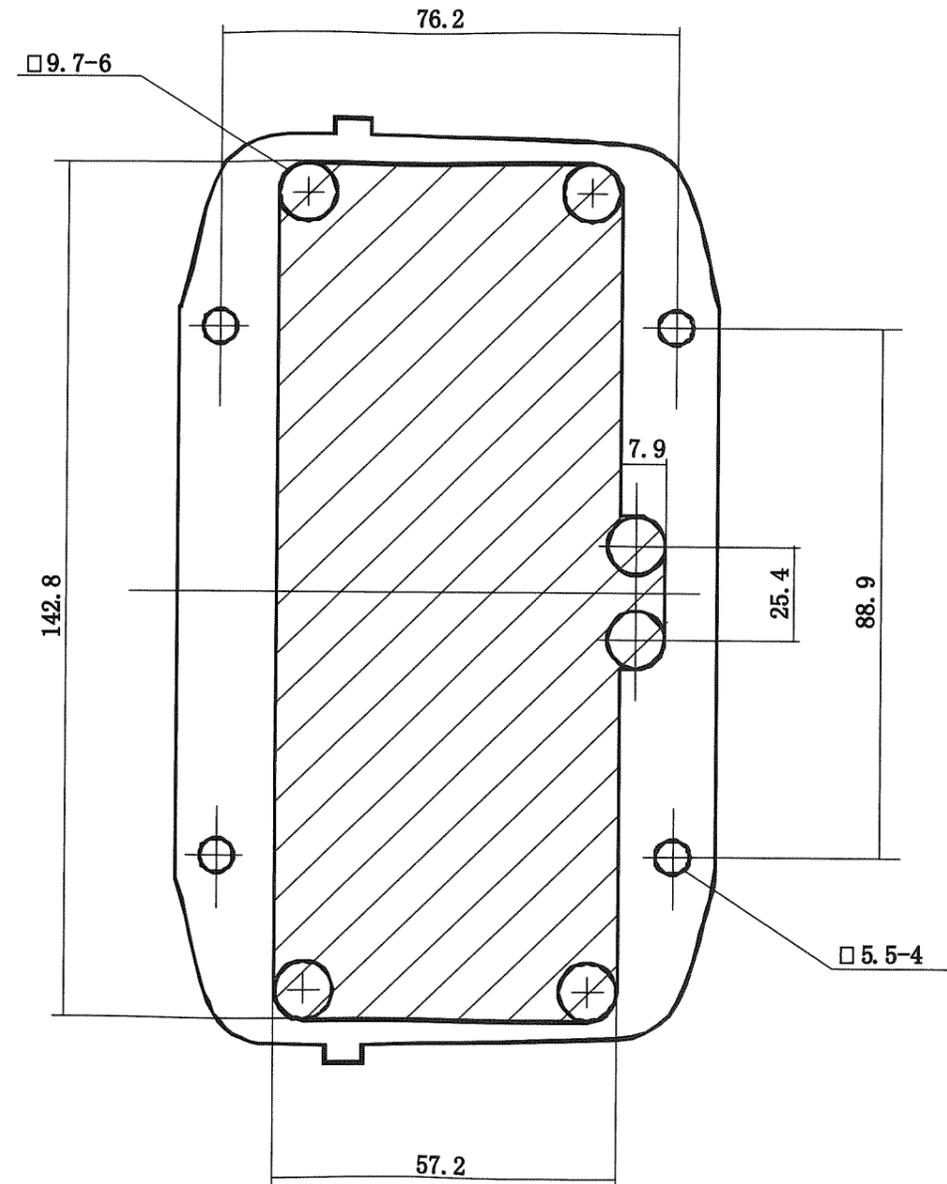
BILL OF MATERIAL

ITEM	QUANTITY	DESCRIPTION	PART NUMBER
1	1	Control housing	YK9-001
2	1	Decal – "FORWARD - REVERSE"	YK9-002
3	4	M5×40 Cross recessed raised countersunk head screw	GB/T13806.1-1992
4	1	Drive gear bearing	YK9-003
5	1	Keyed washer	YK9-004
6	1	Φ38 Cable, elastic ring for cable	GB/T894-1986
7	1	Red ball knob	YK9-005
8	1	Hand lever	YK9-006
9	1	M8×12 Hexagon socket set screw	GB/T80-2000
10	1	M5 Hexagon nut(with non-metallic insert)	GB/T6172.2-2000
11	2	M3 Hexagon nut	GB/6170-2000
12	1	M5×25 Cross recessed pan head screw	GB/T823-1988
13	1	M6 Hexagon nut(with non-metallic insert)	GB/T6172.2-2000
14	1	Φ6 Flat washer	GB/T97.1-1985
15	1	Plastic collar	YK9-007
16	4	Φ5 Flat washer	GB/T97.1-1985
17	4	M5 Hexagon nut	GB/T6170-2000
18	1	Neutral safety switch	YK9-008
19	4	M5×8 Cross recessed pan head screw	GB/T-823-1988
20	2	Cable clamp	YK9-009
21	2	M3×8 Cross recessed pan head screw	GB/T823-1988
22	1	Shift plastic bearing	YK9-010
23	1	Thrust washer	YK9-011
24	1	M5×25 Cross recessed pan head screw	GB/T823-1988
25	1	Linkage assembly	YK9-012
26	1	Shoulder bushing	YK9-013
27	1	M6×25 Cross recessed raised countersunk head screw	GB/T13806.1-1992
28	1	Swivel bracket	YK9-014
29	2	Hexagon screw M6×16	GB/T5783-2000
30	1	Groove pin Φ5×34mm	YK9-015
31	1	Shift arm	YK9-016
32	1	Throttle arm assembly	YK9-017
33	1	Throttle cable terminal	YK9-018
34	1	Side cover	YK9-019
35	1	M5×16 Cross recessed pan head screw	GB/T823-1988
36	1	Split ring B5.5	GB/T896-1986
37	1	Φ8 Flat washer	GB/T97.1-1985
38	1	Conical spring	YK9-020

39	1	Shift cable pivot	YK9-021
40	1	Φ3.5 Cotter pin	GB/T91-2000
41	1	Throttle arm plastic bearing	YK9-022
42	1	Shift gear	YK9-023
43	1	Drive gear	YK9-024
44	1	Waved washer	YK9-025
45	1	M5×8 Cross recessed pan head screw	GB/T823-1988
46	1	Φ5 Internal teeth lock washer	GB/T861-1987
47	1	Spacer washer	YK9-026
48	1	Detent retainer clip	YK9-027
49	2	Flat spring	YK9-028
50	1	Detent roller (Copper)	YK9-029



YK9-D Installation Template



YK9-S Installation Template