

CHAPTER 11

REMOTE CONTROL SYSTEM

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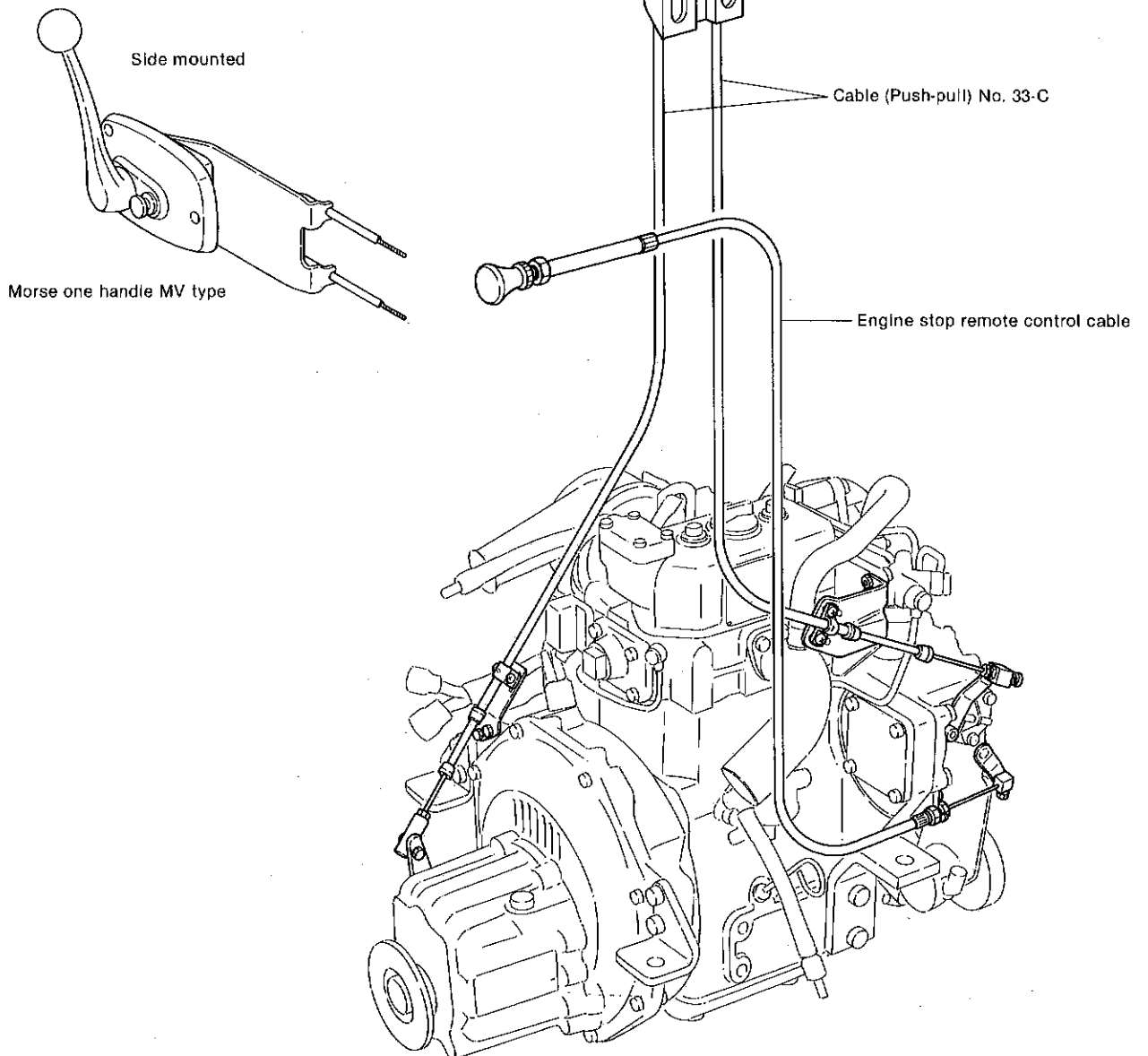
1. Construction

This engine is designed primarily for remote control operation. A remote control cable bracket can be installed by merely adding a remote control lever and link to the engine. Engine stop control and decompression remote control may also be installed, in addition to one-handle remote control, which permits engine speed adjustment and one-handle forward-astern switching.

For this engine, two-handle control cannot be used to replace one-handle control.

1-1 Model 1GM10, 2GM20(F) and 3GM30(F)

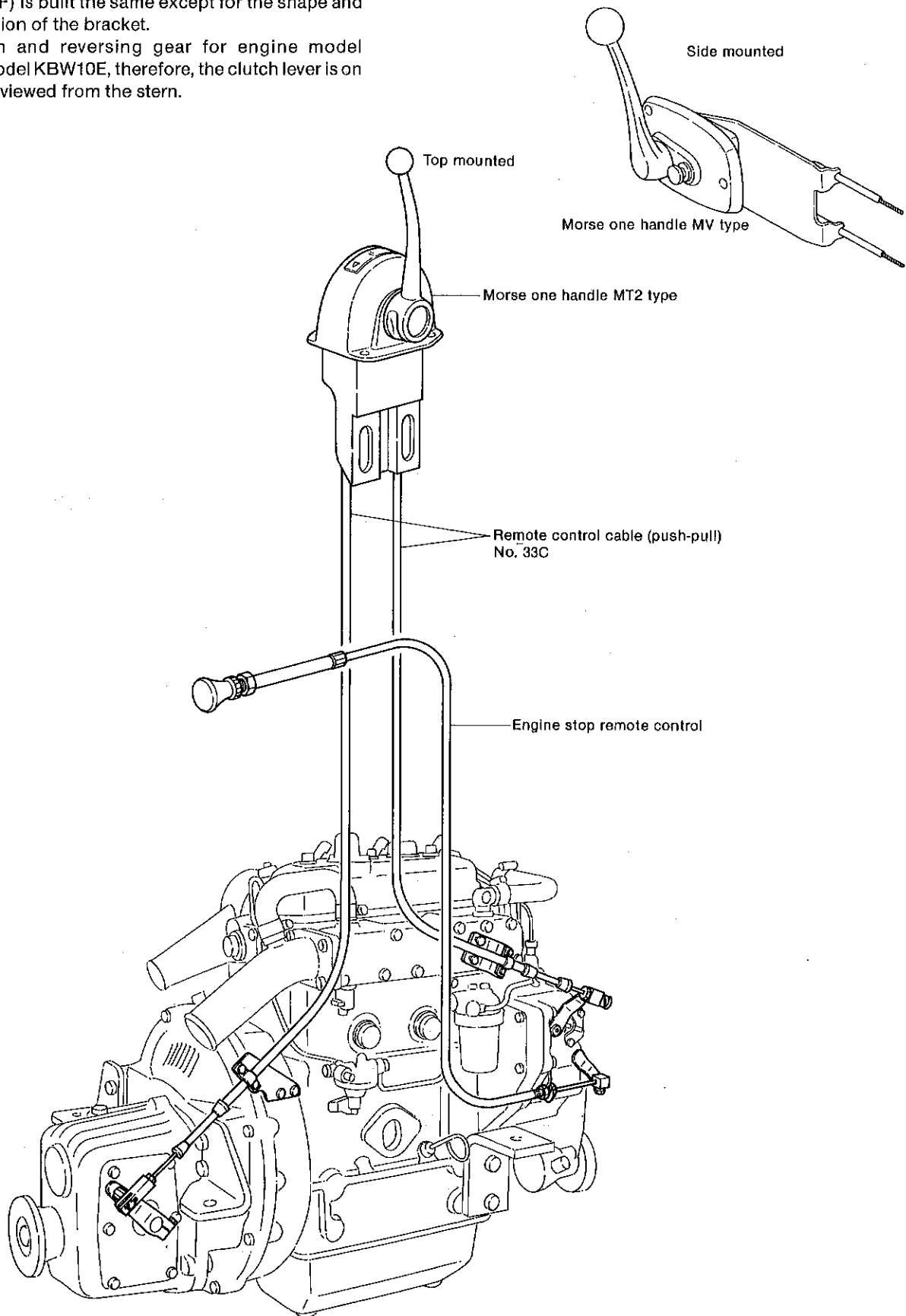
Model KM2-C reduction and reversing gear is used in model 1GM10 and 2GM20(F), 3GM30(F)(C) engines, therefore the forward and reverse lever is on the left when viewed from the stern. The construction for models 1GM10 and 2GM20(F) 3GM30(F) is the same except for the shape and mounting position of the bracket.



1-2 Model 3HM35(F)

Model 3HM35(F) is built the same except for the shape and mounting position of the bracket.

The reduction and reversing gear for engine model 3HM35(F) is model KBW10E, therefore, the clutch lever is on the right when viewed from the stern.

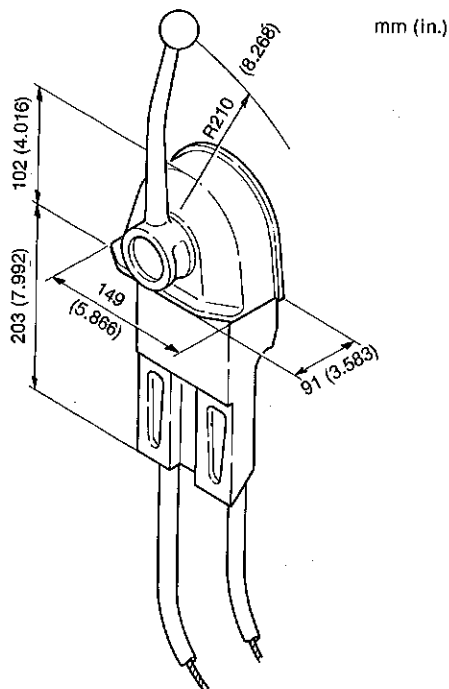


2. Clutch And Speed Regulator Remote Control

2-1 Construction

Both models of MT2 and MV morse one handle remote control can be used. They are optionally available.

2-1.1 MT2 type

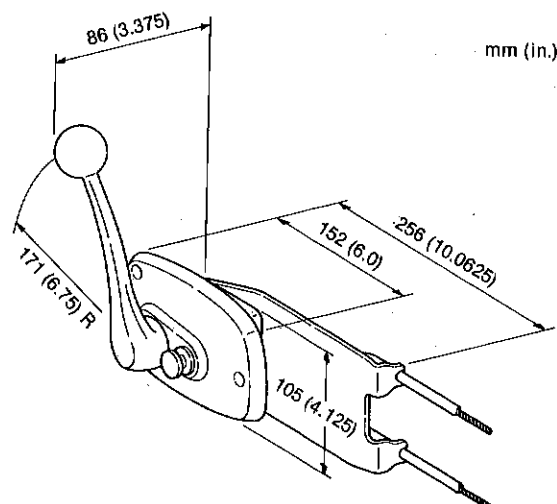


2-2.2 MV type

Newly expanded MV series controls include right and left hand models designed for easier installation and servicing. The MV control can be preassembled and installed without removing side panels.

Pull-out button disengages clutch for full throttle range in neutral for safe starting and warm-up.

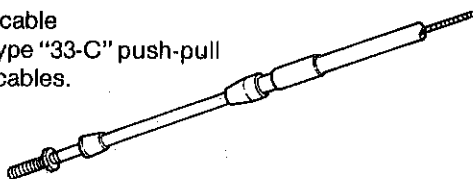
MV controls have forward, neutral and reverse detents; built-in friction to prevent throttle creep.



2-2 One-handle remote control composition

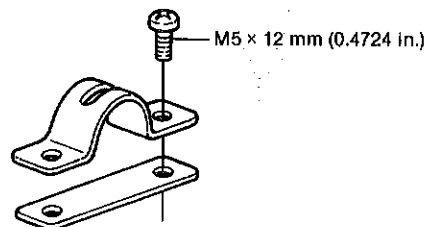
		1GM10, 2GM20(F), 3GM30(F)	3HM35(F)
Speed control	Remote control cable	33-C	
	Clamp	YANMAR made	
Clutch control	Remote control cable	33-C	
	Clamp	YANMAR made	
	Spring joint	YANMAR made	—
	Clevis	—	YANMAR made

- (1) Control cable
Morse Type "33-C" push-pull control cables.



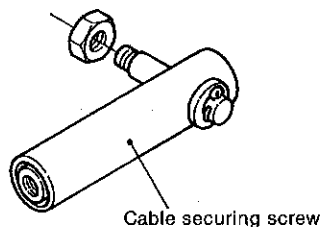
Use only Super-Responsive Morse Control Cables. They are designed specifically for use with Morse control heads. This engineered system of Morse cables, control head and engine connection kits ensures dependable, smooth operation with an absolute minimum of backlash. The thread size on cable ends is 10-32. Travel is up to 3". The core is a solid wire, with a 3/32" diameter.

- (2) Clamp
YANMAR cable clamps are standard parts, and are fitted to the brackets on the engine and clutch.



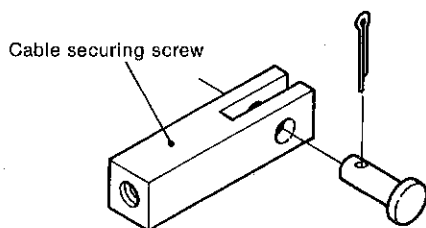
(3) Spring joint

The cone clutch is fitted to engine models 1GM10, 2GM20(F) and 3GM30(F). The spring joint is fitted to the clutch lever, and is also connected to the control cable.



(4) Clevis

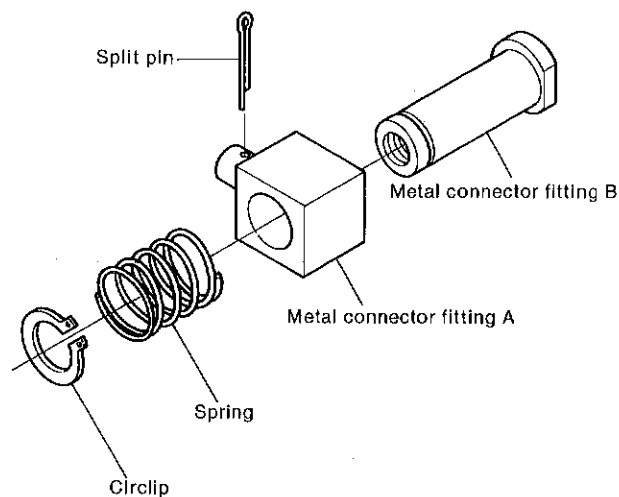
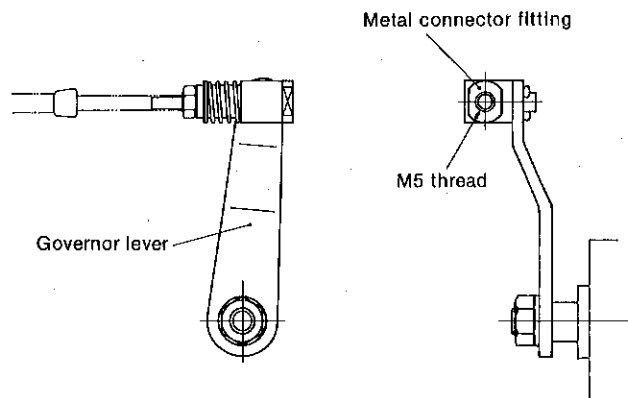
The YANMAR clevis is attached to the clutch lever on model 3HM35(F). Cable securing screw.



2-3 Engine side installation

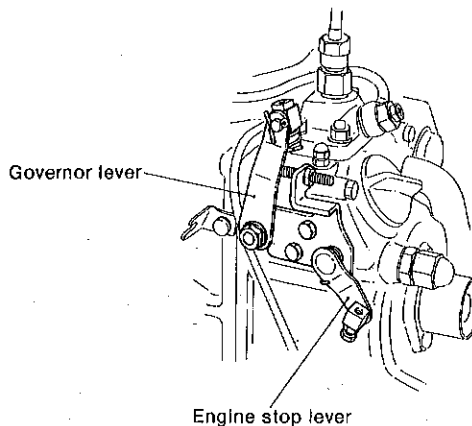
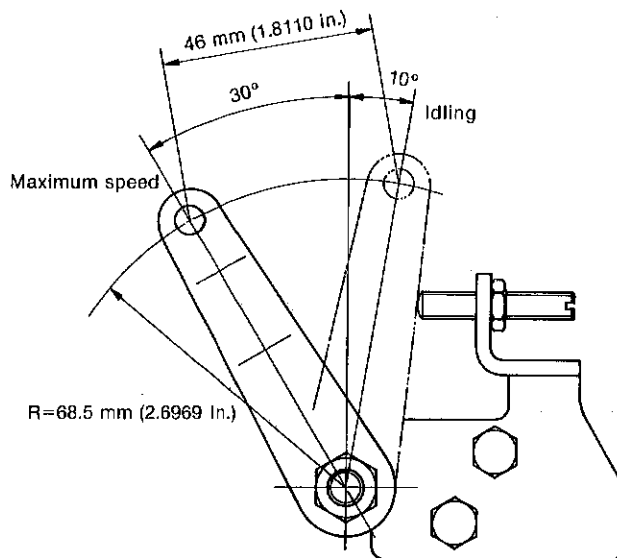
The same governor lever is used in all 4 engine models, however, its operation angle is different depending on the model.

The connecting metal which fits with the damping spring is at the tip of the governor lever, and the cable has only to be screwed into this fitting.

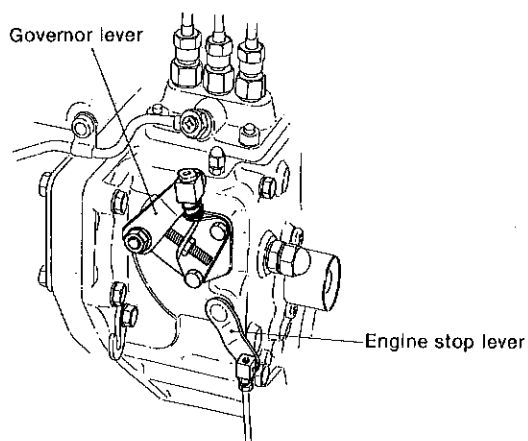
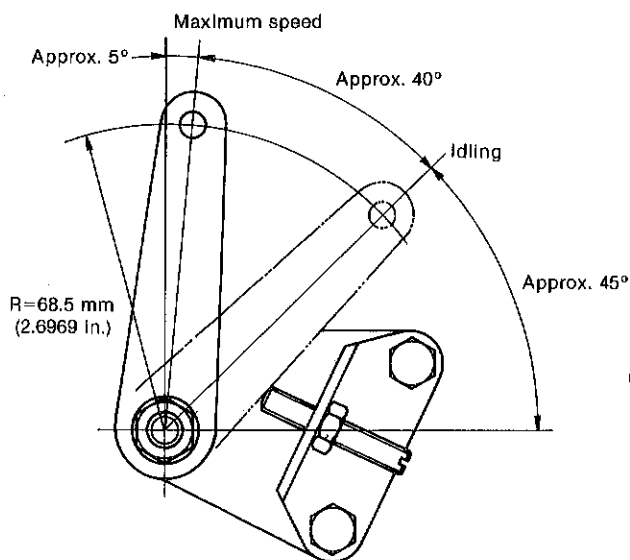


NOTE: When the push-pull cable is fitted, it must be fitted at the spring side.

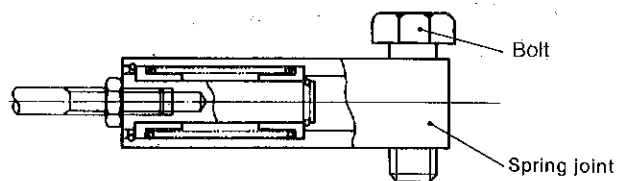
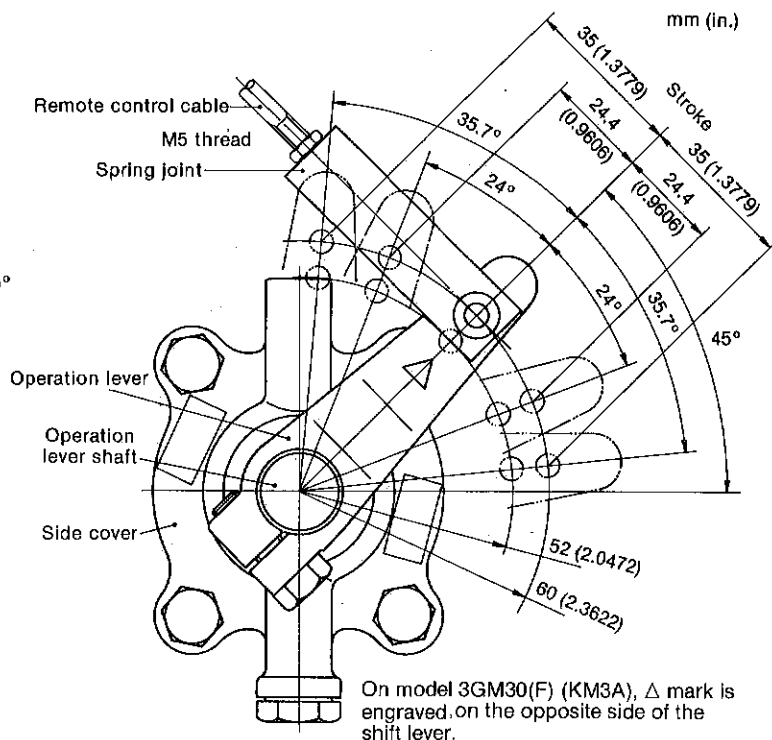
2-3.1 Movement of lever for model 1GM10(C)



2-3.2 Movement of lever for models 2GM20(F)(C), 3GM30(F)(C), and 3HM35(F)(C)



2-4.1 For models 1GM10, 2GM20(F) and 3GM30(F)

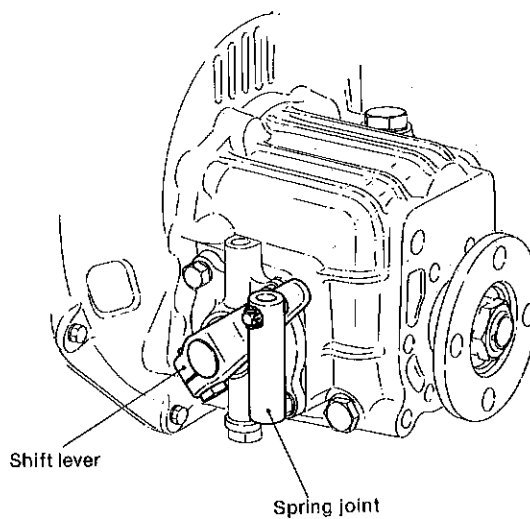


2-4 Setting the reduction and reversing gear side

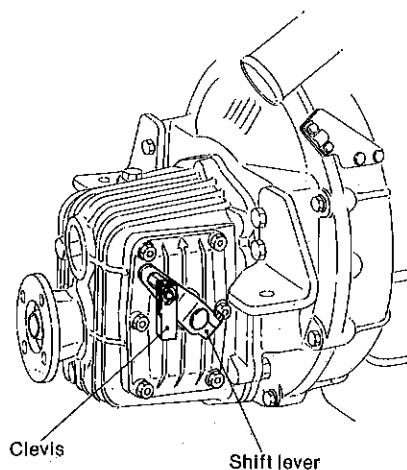
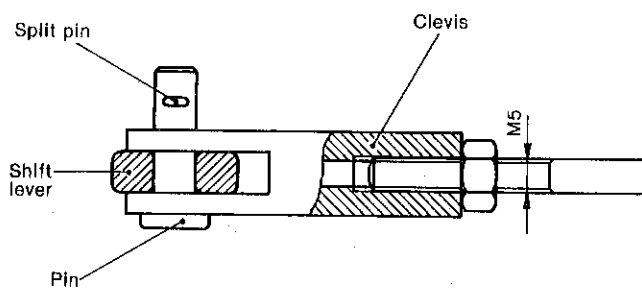
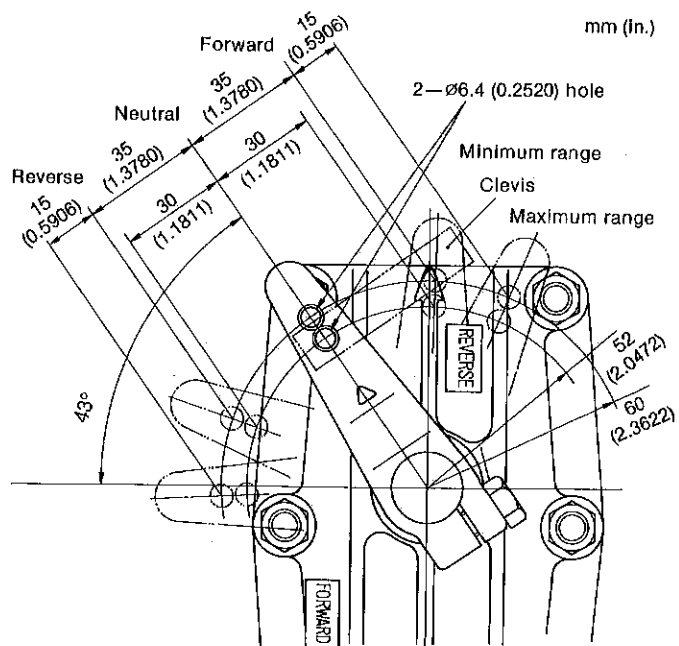
Model KM2C reduction and reversing gear is used for engine models 1GM10 and 2GM20(F), and model KM3A for engine model 3GM30(F).

On these reduction and reversing gears, the spring joint is fitted to the control lever, and the remote control cable is connected to this joint.

Reduction and reversing gear model KBW10E is used on engine model 3HM35(F). On these reduction and reversing gears, the clevis is attached to the clutch operating lever, and the remote control cable is connected to the clevis.

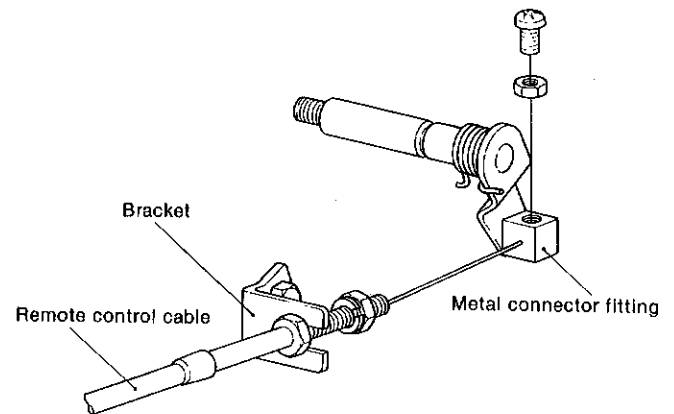
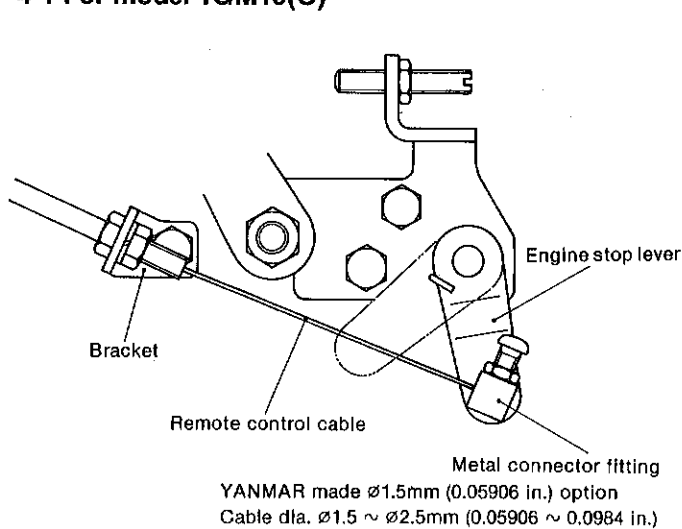


2-4.2 For model 3HM35(F)



3. Engine Stop Remote Control

4-1 For model 1GM10(C)



4-2 For models 2GM20(F)(C), 3GM30(F)(C) and 3HM35(F)(C)

