



# CLUTCH PUMP INSTALLATION INSTRUCTIONS

- **WARNING – This clutch pump is for a 12 volt D.C. circuit.**  
Immediately upon unpacking the clutch pump, check for shipping damage by spinning the clutch by hand.
- **This package should contain the following:**

1 – Clutch Pump	1 – Fork Connector	1 – In-line Fuse
1 – Rocker Switch & Light	3 – Spade Connectors	1 – Protection Harness
2 – Ring Terminals	2 – Butt Splices	
2 – Star Washers	1 – Switch Mounting Bracket with Screws, Lockwashers & Nuts	

## FANBELT CLUTCH PUMP INSTALLATION

### • Mounting Bracket for Clutch Pump

Muncie has clutch pump engine mounting kits for selected engines. Contact Muncie for further information. These kits work on new style engines with serpentine belt drive.

### • Fanbelt Clutch Pump Drive (Standard add on pulley)

Driven directly from crankshaft pulley with two (2) "A" belts, optional 8 groove poly V belt.

A 180° wrap on the drive and driven pulleys is desirable.

The clutch pump sheaves must be exactly aligned with the crankshaft sheaves.

The clutch pump should be located as close to the crankshaft as possible.

### • Fanbelt Clutch Pump Drive (Serpentine drive off OEM pulley)

Uses 6 or 8 groove class K-poly "V" belt.

Maximum horsepower recommended draw is 10 HP.

Taps into factory belt drive.

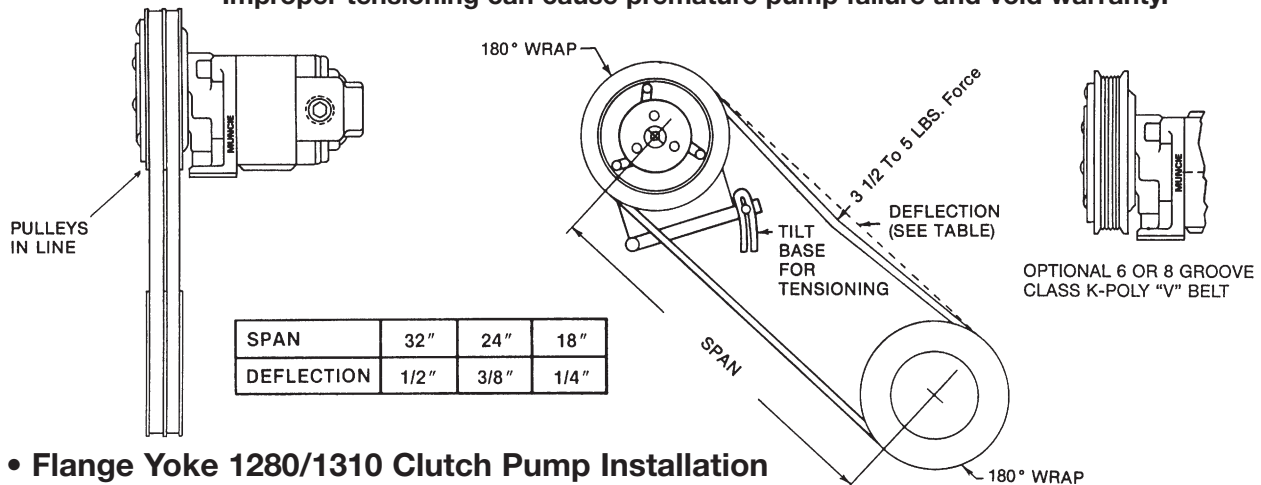
Clutch pump sheave must be aligned with the other pulleys.

### • Fanbelt Tensioning

A moveable mounting base or idler pulley is acceptable for tensioning. Poly V belt kit uses a spring loaded automatic belt tensioner. A Dodge belt tension tester #109082 or its equivalent should be used to determine the proper belt tension on "A" belts.

It should take a force of 3.5 to 5 lbs. to deflect the belt 3/16" per foot of span.

**Improper tensioning can cause premature pump failure and void warranty.**



### • Flange Yoke 1280/1310 Clutch Pump Installation

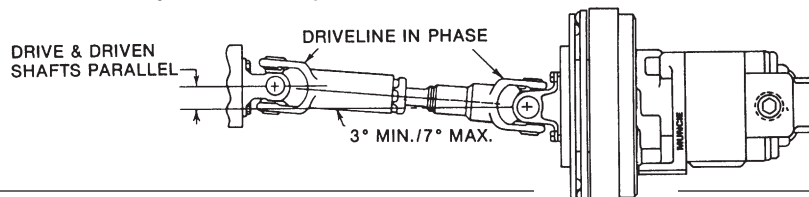
Use a 1280/1310 series tubular drive line assembly.

True joint angle of drive line must be greater than three degrees and less than seven degrees.

The clutch pump shaft and the engine crankshaft must be parallel to each other.

The flange yokes on the drive line assembly must be in phase.

**If the above parameters are not complied with, a premature failure may occur and void warranty.**



## ROCKER SWITCH & LIGHT INSTALLATION

This switch is usually mounted in the dashboard frame at the base of the dash. Using the mounting bracket as a template, drill two (2) 7/32" dia. holes in the frame. Use the two (2) capscrews, lockwashers and nuts to attach bracket to frame.

## WIRING INSTALLATION

Plug protection harness onto coil wires.

Two (2) separate lengths of wire are needed for installation. Use excess from protection harness if available.

1. Rocker switch to accessory fuse panel.
2. Rocker switch to ground.

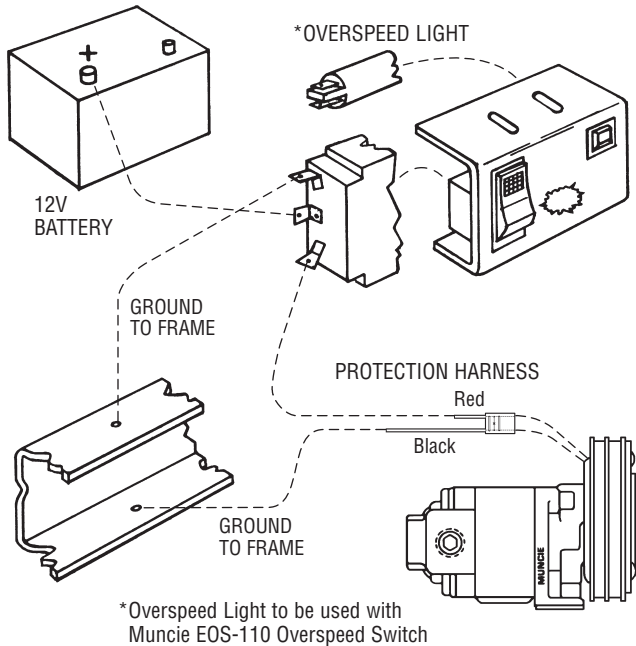
Determine the two (2) required lengths of wire and cut appropriately.

Crimp a spade terminal onto the appropriate wires and connect to the correct brass male spade on the rocker switch (see diagram).

Attach the other end of the ground wire from the rocker switch to the predetermined ground point with a ring terminal and star washer.

Attach the other end of the fuse wire to a terminal in the accessory fuse panel.

Attach coil ground wire to frame with a ring terminal and star washer. Do not ground to pump or pump bracket. Failure to connect protection harness correctly will lead to high flyback voltages and potential chassis electrical component damage.



**NOTE:** Muncie does not burnish the clutch plate of all fan belt clutch pumps. Burnishing is necessary upon installation. All FB, FBH, SB and FY clutch pumps should be burnished as described below.

### Clutch Pump Start Up and Burnishing

1. Back relief valve down to 500 PSI and cycle rocker switch 15 times with truck engine at 1000 RPM.  
Note: Cycle 25 times for FBH style.
2. Repeat step #1 at 1500 PSI (except FBH style repeat 25 cycles in 500 PSI increments up to the desired pressure relief setting).
3. If the armature leaf spring and disc do not snap firmly against the friction surface, check voltage at clutch lead.
4. Less than 11.5 volts will result in clutch slippage and consequent damage to the clutch.

- **Clutch may need to be reburnished if equipment is placed back into service after extended non-usage (over 30 days).**

**RESERVOIR PLACEMENT:** The level of the oil in the reservoir should be no lower than the inlet port of the pump.

**SUITABLE FLUIDS:** SAE 10W A.W.R. & O. Hydraulic Oil with Anti-Wear, Rust and Oxidation Additives. Systems not to exceed a maximum of 180°F. Inlet Supply Condition not to exceed 5 in.Hg at operating speed. Viscosity should not exceed 7500 SSU at lowest startup temperature. Continuous operation viscosity should range between 60-1000 SSU for all temperature ranges.

**FILTRATION:** Return line filter in the 10 micron range is acceptable. Suction filters and strainers are not approved...if the system is cleaned properly, they are unnecessary. Filter should be changed at regular hydraulic maintenance intervals.

**HOSE SIZES:** All hoses are to be sized so that the flow velocity, rated in feet per second (FPS), does not exceed 15 FPS in the pressure line, 8 FPS in the return line and 4 FPS in the inlet line.

