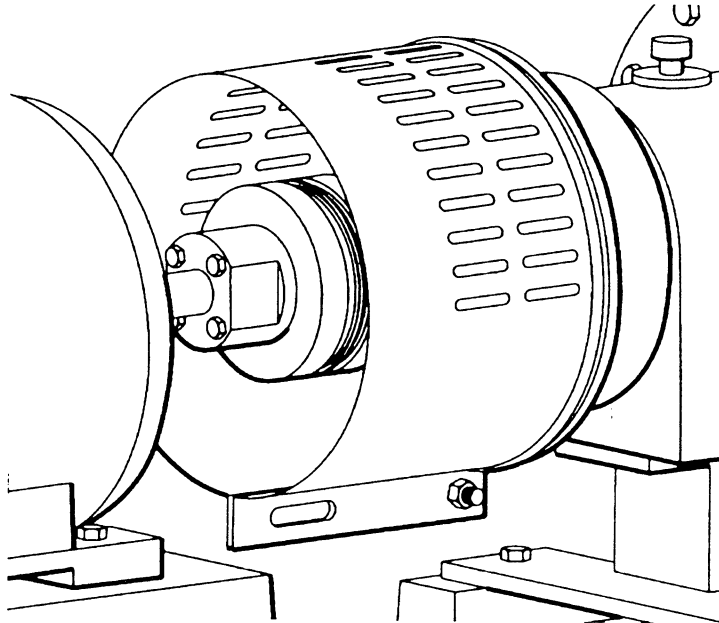


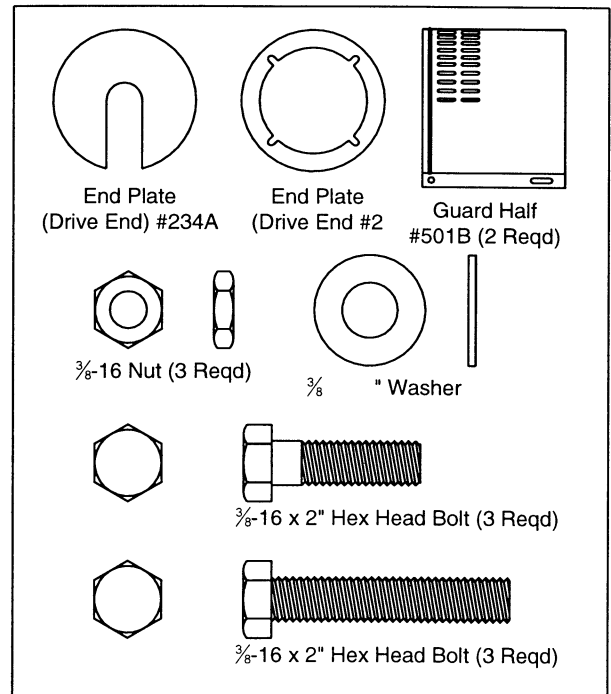


Coupling Guards

Selection Guide and Part Numbers



Goulds Pumps meets OSHA requirements* for coupling guards to upgrade existing equipment. Guards are available in carbon steel, aluminum for non sparking safety, and 316 stainless steel for corrosive environments. Hardware is provided in 304SS and each guard is painted OSHA orange. (Kits include parts shown at right.)



* (Complies with OSHA 1910 and ANSI Standard B15.1)

IMPORTANT SAFETY NOTICE

To: Our Valued Customers

User safety is a major focus in the design of our products. Following the precautions outlined in this manual will minimize your risk of injury.

ITT Goulds pumps will provide safe, trouble-free service when properly installed, maintained, and operated.

Safe installation, operation, and maintenance of ITT Goulds Pumps equipment are an essential end user responsibility. This *Pump Safety Manual* identifies specific safety risks that must be considered at all times during product life. Understanding and adhering to these safety warnings is mandatory to ensure personnel, property, and/or the environment will not be harmed. Adherence to these warnings alone, however, is not sufficient — it is anticipated that the end user will also comply with industry and corporate safety standards. Identifying and eliminating unsafe installation, operating and maintenance practices is the responsibility of all individuals involved in the installation, operation, and maintenance of industrial equipment.

Please take the time to review and understand the safe installation, operation, and maintenance guidelines outlined in this Pump Safety Manual and the Instruction, Operation, and Maintenance (IOM) manual. Current manuals are available at www.gouldspumps.com/literature_ioms.html or by contacting your nearest Goulds Pumps sales representative.

These manuals must be read and understood before installation and start-up.

For additional information, contact your nearest Goulds Pumps sales representative or visit our Web site at www.gouldspumps.com.

SAFETY WARNINGS

Specific to pumping equipment, significant risks bear reinforcement above and beyond normal safety precautions.

 **WARNING**

A pump is a pressure vessel with rotating parts that can be hazardous. Any pressure vessel can explode, rupture, or discharge its contents if sufficiently over pressurized causing death, personal injury, property damage, and/or damage to the environment. All necessary measures must be taken to ensure over pressurization does not occur.

 **WARNING**

Operation of any pumping system with a blocked suction and discharge must be avoided in all cases. Operation, even for a brief period under these conditions, can cause superheating of enclosed pumpage and result in a violent explosion. All necessary measures must be taken by the end user to ensure this condition is avoided.

 **WARNING**

The pump may handle hazardous and/or toxic fluids. Care must be taken to identify the contents of the pump and eliminate the possibility of exposure, particularly if hazardous and/or toxic. Potential hazards include, but are not limited to, high temperature, flammable, acidic, caustic, explosive, and other risks.

 **WARNING**

Pumping equipment Instruction, Operation, and Maintenance manuals clearly identify accepted methods for disassembling pumping units. These methods must be adhered to. Specifically, applying heat to impellers and/or impeller retaining devices to aid in their removal is strictly forbidden. Trapped liquid can rapidly expand and result in a violent explosion and injury.

ITT Goulds Pumps will not accept responsibility for physical injury, damage, or delays caused by a failure to observe the instructions for installation, operation, and maintenance contained in this Pump Safety Manual or the current IOM available at www.gouldspumps.com/literature.

SAFETY

DEFINITIONS

Throughout this manual the words **WARNING**, **CAUTION**, **ELECTRICAL**, and **ATEX** are used to indicate where special operator attention is required.

Observe all Cautions and Warnings highlighted in this Pump Safety Manual and the IOM provided with your equipment.



WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Example: Pump shall never be operated without coupling guard installed correctly.



CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Example: Throttling flow from the suction side may cause cavitation and pump damage.




ELECTRICAL HAZARD

Indicates the possibility of electrical risks if directions are not followed.

Example: Lock out driver power to prevent electric shock, accidental start-up, and physical injury.









When installed in potentially explosive atmospheres, the instructions that follow the Ex symbol must be followed. Personal injury and/or equipment damage may occur if these instructions are not followed. If there is any question regarding these requirements or if the equipment is to be modified, please contact an ITT Goulds Pumps representative before proceeding.














Example:  Improper impeller adjustment could cause contact between the rotating and stationary parts, resulting in a spark and heat generation.



GENERAL PRECAUTIONS

WARNING

A pump is a pressure vessel with rotating parts that can be hazardous. Hazardous fluids may be contained by the pump including high temperature, flammable, acidic, caustic, explosive, and other risks. Operators and maintenance personnel must realize this and follow safety measures. Personal injuries will result if procedures outlined in this manual are not followed. ITT Goulds Pumps will not accept responsibility for physical injury, damage or delays caused by a failure to observe the instructions in this manual and the IOM provided with your equipment.

General Precautions		
WARNING		NEVER APPLY HEAT TO REMOVE IMPELLER. It may explode due to trapped liquid.
WARNING		NEVER use heat to disassemble pump due to risk of explosion from tapped liquid.
WARNING		NEVER operate pump without coupling guard correctly installed.
WARNING		NEVER run pump below recommended minimum flow when dry, or without prime.
WARNING		ALWAYS lock out power to the driver before performing pump maintenance.
WARNING		NEVER operate pump without safety devices installed.
WARNING		NEVER operate pump with discharge valve closed.
WARNING		NEVER operate pump with suction valve closed.
WARNING		DO NOT change service application without approval of an authorized ITT Goulds Pumps representative.
WARNING		<p>Safety Apparel:</p> <ul style="list-style-type: none"> ♦ Insulated work gloves when handling hot bearings or using bearing heater ♦ Heavy work gloves when handling parts with sharp edges, especially impellers ♦ Safety glasses (with side shields) for eye protection ♦ Steel-toed shoes for foot protection when handling parts, heavy tools, etc. ♦ Other personal protective equipment to protect against hazardous/toxic fluids
WARNING		<p>Receiving:</p> <p>Assembled pumping units and their components are heavy. Failure to properly lift and support equipment can result in serious physical injury and/or equipment damage. Lift equipment only at specifically identified lifting points or as instructed in the current IOM. Current manuals are available at www.gouldspumps.com/literature_ioms.html or from your local ITT Goulds Pumps sales representative. Note: Lifting devices (eyebolts, slings, spreaders, etc.) must be rated, selected, and used for the entire load being lifted.</p>
WARNING		<p>Alignment:</p> <p>Shaft alignment procedures must be followed to prevent catastrophic failure of drive components or unintended contact of rotating parts. Follow coupling manufacturer's coupling installation and operation procedures.</p>

General Precautions		
WARNING		Before beginning any alignment procedure, make sure driver power is locked out. Failure to lock out driver power will result in serious physical injury.
CAUTION		Piping: Never draw piping into place by forcing at the flanged connections of the pump. This may impose dangerous strains on the unit and cause misalignment between pump and driver. Pipe strain will adversely effect the operation of the pump resulting in physical injury and damage to the equipment.
WARNING		Flanged Connections: Use only fasteners of the proper size and material.
WARNING		Replace all corroded fasteners.
WARNING		Ensure all fasteners are properly tightened and there are no missing fasteners.
WARNING		Startup and Operation: When installing in a potentially explosive environment, please ensure that the motor is properly certified.
WARNING		Operating pump in reverse rotation may result in contact of metal parts, heat generation, and breach of containment.
WARNING		Lock out driver power to prevent accidental start-up and physical injury.
WARNING		The impeller clearance setting procedure must be followed. Improperly setting the clearance or not following any of the proper procedures can result in sparks, unexpected heat generation and equipment damage.
WARNING		If using a cartridge mechanical seal, the centering clips must be installed and set screws loosened prior to setting impeller clearance. Failure to do so could result in sparks, heat generation, and mechanical seal damage.
WARNING		The coupling used in an ATEX classified environment must be properly certified and must be constructed from a non-sparking material.
WARNING		Never operate a pump without coupling guard properly installed. Personal injury will occur if pump is run without coupling guard.
WARNING		Make sure to properly lubricate the bearings. Failure to do so may result in excess heat generation, sparks, and / or premature failure.
CAUTION		The mechanical seal used in an ATEX classified environment must be properly certified. Prior to start up, ensure all points of potential leakage of process fluid to the work environment are closed.
CAUTION		Never operate the pump without liquid supplied to mechanical seal. Running a mechanical seal dry, even for a few seconds, can cause seal damage and must be avoided. Physical injury can occur if mechanical seal fails.
WARNING		Never attempt to replace packing until the driver is properly locked out and the coupling spacer is removed.
WARNING		Dynamic seals are not allowed in an ATEX classified environment.
WARNING		DO NOT operate pump below minimum rated flows or with suction and/or discharge valve closed. These conditions may create an explosive hazard due to vaporization of pumpage and can quickly lead to pump failure and physical injury.

General Precautions		
WARNING		Ensure pump is isolated from system and pressure is relieved before disassembling pump, removing plugs, opening vent or drain valves, or disconnecting piping.
WARNING		Shutdown, Disassembly, and Reassembly: Pump components can be heavy. Proper methods of lifting must be employed to avoid physical injury and/or equipment damage. Steel toed shoes must be worn at all times.
WARNING		The pump may handle hazardous and/or toxic fluids. Observe proper decontamination procedures. Proper personal protective equipment should be worn. Precautions must be taken to prevent physical injury. Pumpage must be handled and disposed of in conformance with applicable environmental regulations.
WARNING		Operator must be aware of pumpage and safety precautions to prevent physical injury.
WARNING		Lock out driver power to prevent accidental startup and physical injury.
CAUTION		Allow all system and pump components to cool before handling them to prevent physical injury.
CAUTION		If pump is a Model NM3171, NM3196, 3198, 3298, V3298, SP3298, 4150, 4550, or 3107, there may be a risk of static electric discharge from plastic parts that are not properly grounded. If pumped fluid is non-conductive, pump should be drained and flushed with a conductive fluid under conditions that will not allow for a spark to be released to the atmosphere.
WARNING		Never apply heat to remove an impeller. The use of heat may cause an explosion due to trapped fluid, resulting in severe physical injury and property damage.
CAUTION		Wear heavy work gloves when handling impellers as sharp edges may cause physical injury.
CAUTION		Wear insulated gloves when using a bearing heater. Bearings will get hot and can cause physical injury.

ATEX CONSIDERATIONS and INTENDED USE

Special care must be taken in potentially explosive environments to ensure that the equipment is properly maintained. This includes but is not limited to:

1. Monitoring the pump frame and liquid end temperature.
2. Maintaining proper bearing lubrication.
3. Ensuring that the pump is operated in the intended hydraulic range.

The ATEX conformance is only applicable when the pump unit is operated within its intended use. Operating, installing or maintaining the pump unit in any way that is not covered in the Instruction, Operation, and Maintenance manual (IOM) can cause serious personal injury or damage to the equipment. This includes any modification to the equipment or use of parts not provided by ITT Goulds Pumps. If there is any question regarding the intended use of the equipment, please contact an ITT Goulds representative before proceeding. Current IOMs are available at www.gouldspumps.com/literature_ioms.html or from your local ITT Goulds Pumps Sales representative.

All pumping unit (pump, seal, coupling, motor and pump accessories) certified for use in an ATEX classified environment, are identified by an ATEX tag secured to the pump or the baseplate on which it is mounted. A typical tag would look like this:



The CE and the Ex designate the ATEX compliance. The code directly below these symbols reads as follows:

- II = Group 2
- 2 = Category 2
- G/D = Gas and Dust present
- T4 = Temperature class, can be T1 to T6 (see Table 1)

Code	Max permissible surface temperature °F (°C)	Max permissible liquid temperature °F (°C)
T1	842 (450)	700 (372)
T2	572 (300)	530 (277)
T3	392 (200)	350 (177)
T4	275 (135)	235 (113)
T5	212 (100)	Option not available
T6	185 (85)	Option not available

The code classification marked on the equipment must be in accordance with the specified area where the equipment will be installed. If it is not, do not operate the equipment and contact your ITT Goulds Pumps sales representative before proceeding.

PARTS



The use of genuine Goulds parts will provide the safest and most reliable operation of your pump. ITT Goulds Pumps ISO certification and quality control procedures ensure the parts are manufactured to the highest quality and safety levels.

Please contact your local Goulds representative for details on genuine Goulds parts.

Selection Guide Instructions

Please refer to the following pages for a complete listing of the OSHA* approved coupling guards available for use with your Goulds pump.

Creating the correct part number to order is as easy as 1-2-3. Follow these instructions:

1. Identify the pump **model** and **group**.

Example:3175S

2. Identify the **motor frame size** for that unit.

Example:284T

3. Choose the appropriate material of construction you require for that piece of equipment.

Example:CS

You now have all the information necessary to create the correct Goulds part number.

1. From the **model** and **group** information, copy the **assembly number**.

In this case "0A03155A-"

2. From the motor frame size column, copy the corresponding suffix number from the adjacent row.

In this case, the letter "B"

3. Select the corresponding Goulds material code from the construction list.

In this case, carbon steel equals code "3201".

Combine the information as Goulds Part No. **0A03155A-B3201**

Place an order with your Goulds representative giving the equipment numbers so the guard can be tagged properly prior to shipment.



Model 3175

3175S Coupling Guards Assembly No. 0A03155A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size							
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
213T,215T, 254T,254U, 256T,256U, 284TS,284U, 286TS,286U	A				SC12	1100 T31	PS- 100	351 DBZ-C	225 RSS	3.5B	40 ES-R	80D0
284T,286T	B											
324S,326S	B											
324T,324TS, 324U,326T, 326TS,326U, 364TS,364US, 365TS,365US	C											
364U,365U	E											
364T,365T	F				SC14	1130 T31	PS- 140	451 DBZ-C	225 RSS	3.5B	70 ES-R	90D0
404T,404U, 405T,405U	G											
404TS,404US, 405TS,405US	C											
444T,445T	H											
444U,445U	G											
444US,445US	C											
444TS,445TS	F											
447T	H											
447TS	E											

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

3175M Coupling Guards ASSEMBLY NO. 0A03159A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size							
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
254T,256T	A				SC14	1130 T31	PS- 140	451 DBZ-C	225 RSS	3.5B	70 ES-R	90D0
284TS,286TS	B											
284U,286U	A											
284T,286T	C											
324S,326S	A											
324T,324TS, 324U,326T, 326TS,326U	C											
364US,365US	D											
364TS,364U, 365TS,365U	C											
364T,365T, 404T,404U, 405T,405U	E											
404TS,404US, 405TS,405US	C											
444T,445T	F											
444U,445U	E											
444US,445US	C											
444TS,445TS	E											
447T	F											
447TS	E											

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

3175L Coupling Guards Assembly No. 0A03160A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size							
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
364TS,364U, 364US,365TS, 365U,365US	B				SC14	1130 T-31	PS- 140	451 DBZ-C	225 RSS	3.5B	70 ES-R	90D0
364T,365T, 404T,404U, 405T,405U,	A											
404TS,404US, 405TS,405US	B											
444T,445T	C											
444TS,445TS	A											
444U,445U	A											
444US,445US	B											
447T	C											
447TS	A											

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211



Model 3196

(With T Series Power Ends)

NM 3196 ST, 3196 ST, 3198 ST, 3796 ST
Coupling Guards

ASSEMBLY NO. 0A03151A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size							
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
56,143T, 145T,182, 182T,184, 184T,213, 215	A				SC10	1070 T31	PS70	263 DBZ-C	225 RSS	2.5B	20 ES-R	50D0
213T,215T, 254T,254U, 256U	B											
256T,284TS	C											
286TS,286U	B											
284U	D											
284T,286T	E											

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

(With X-Series Power Ends)
NM 3196 STX, 3196 STX, 3198 STX, 3296 S, 3796 STX
Coupling Guards
ASSEMBLY NO. 0A03751A (Scotchkote - 0A03753A)

Motor Frames NEMA	Suf- fix No.	Guard					Maximum Coupling							
		Mat'l/Code					Size							
		Steel 3201	Alum 9913	316SS 3211	Brass 9953	Scotch- kote 6693	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
56,														
143T														
145T														
182														
182T	A													
184														
184T														
213														
215														
213T							SC10	1070	PS	263	225	2.5	20	50
215T								T31	70	DBZ	RSS	B	ES-	DO
254T	B									-C			R	
254U														
256U														
256T														
284TS	B													
286TS														
286U	B													
284U	B													
284T														
286T	E													

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

**NM 3196 STX, 3196 STX, 3198 STX, 3296 S, 3796STX
Coupling Guards**

ASSEMBLY NO. 0A03751A (Scotchkote - 0A03753A)

Motor Frames I.E.C.	Suf- fix No.	Guard Mat'l/Code					Maximum Coupling Size								
		Steel 3201	Alum 9913	316SS 3211	Brass 9953	Scotch- kote 6693	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers	
		80													
90 S&M															
100M & L							SC10	1070	PS	263	225	2.5	20	50	
112M	A							T31	70	DBZ	RSS	B	ES- R	DO	
132S&M										-C					
160M&L	B														
180M&L	E														

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

**T-Series Power Ends
 NM 3196 MT, 3196 MT, 3198 MT, 3796 MT
 3196 LT, 3796 LT
 Coupling Guards
 ASSEMBLY NO. 0A03152A-**

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size							
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
56,143T, 145T,182, 182T,184, 184T,213,215	A				SC10	1070 T31	PS70	263 DBZ-C	225 RSS	2.5B	20 ES-R	50D0
213T,215T, 254T,254U, 256T,256U,												
284TS,286TS	B											
284U,286U	C											
284T,286T	D											
324S,326S	E											
324T,326T	F											
324TS,326TS	G											
324U,326U	H											
364TS,364US, 365TS,365US	G				SC12	1100 T31	PS- 100	351 DBZ-C	225 RSS	3.5B	40 ES-R	80D0
364T,365T	H											
364U,365U	F											
404TS,404US, 405TS,405US,												
444US	G											
444TS	H											

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

**X-Series Power Ends
 NM 3196 MTX, 3196 MTX, 3198 MTX, 3796 MTX, 3196 LTX,
 3796 LTX Coupling Guards**

ASSEMBLY NO. 0A03752A (Scotchkote - 0A03754A)

Motor Frames NEMA	Suf- fix No.	Guard Mat'l/Code				Maximum Coupling Size							
		Steel 3201	Alum 9913	316SS 3211	Scotch- kote 6693	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
56, 143T, 145T 182, 184	A					SC10	1070 T31	PS70	263 DBZ- C	225 RSS	2.5B	20 ES -R	50 DO
182T, 184T 213, 215	B												
213T, 215T	F												
254T, 254U 256T, 256U 284TS, 286TS	C												
284U, 286U 284T, 286T		D											

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

**NM 3196 MTX, 3196 MTX, 3198 MTX, 3796 MTX, 3196 LTX,
3796 LTX Coupling Guards**

ASSEMBLY NO. 0A03752A (Scotchkote - 0A03754A)

Motor Frames NEMA	Suf- fix No.	Guard				Maximum Coupling								
		Mat'l/Code				Size								
		Steel 3201	Alum 9913	316SS 3211	Scotch- kote 6693	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers	
80, 90L, 90S	A					SC10	1070 T31	PS70	263 DBZ- C	225 RSS	2.5B	20 ES -R	50 DO	
100L 112M, 112S	B													
132M, 132S 160L, 160M	C													
180L, 180M	D													

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

**NM 3196 MTX, 3196 MTX, 3198 MTX, 3796 MTX, 3196 LTX,
3796 LTX Coupling Guards**

ASSEMBLY NO. 0A03752A (Scotchkote - 0A03754A)

Motor Frames NEMA	Suf- fix No.	Guard				Maximum Coupling							
		Mat'l/Code				Size							
		Steel 3201	Alum 9913	316SS 3211	Scotch- kote 6693	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
324S, 326S	C												
324T 326T, 324TS 326TS, 324U 326U, 364TS 364US, 365TS 365US	D					SC12	1100 T31	PS- 100	351 DBZ -C	225 RSS	3.5B	40 ES-R	80 DO
364T, 365T	E												
364U, 365U	D												
404TS 404US, 405TS 405US, 444US	D												
444TS	E												

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

**NM 3196 MTX, 3196 MTX, 3198 MTX, 3796 MTX, 3196 LTX,
3796 LTX Coupling Guards**

ASSEMBLY NO. 0A03752A (Scotchkote - 0A03754A)

Motor Frames NEMA	Suf- fix No.	Guard				Maximum Coupling							
		Mat'l/Code				Size							
		Steel 3201	Alum 9913	316SS 3211	Scotch- kote 6693	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
200L	D					SC12	1100	PS-	351	225	3.5B	40	80
225M 225S, 250M	E						T31	100	DBZ -C	RSS		ES-R	

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

**3196XLT, 3196XLT-X, 3196X-17 Coupling Guards
ASSEMBLY NO. 0A03156A-**

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size								
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers	
213,215	C				SC12	1100 T31	PS- 100	351 DBZ-C	225 RSS	3.5B	40 ES-R	80D0	
213T,215T, 254T,254U, 256T,256U	A												
284T,286T	B												
284TS,284U, 286TS,286U	A												
324S,326S	H				SC14	1130 T31	PS- 140	451 DBZ-C	225 RSS	3.5B	70 ES-R	90D0	
324T,324TS, 324U,326T, 326TS,326U, 364TS,364U, 364US,365TS, 365U,365US	G												
364T,365T, 404T,404U, 405T,405U	D												
404TS,404US, 405TS,405US	G												
444T,445T	F												
444U,445U	D												
444US,445US	G												
444TS,445TS, 447T	E												

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211



Model 3316 and 3405

3316S & 3405S Coupling Guards ASSEMBLY NO. 0A03170A-

Motor Frames ^ ^ ^	Suffix No.	Guard Mat'l/Code			Maximum Coupling Size		
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge
143T,145T, 182,182T, 184,184T, 213,215	A				12 S	1100 T10	PX- 100
213T,215T, 254T,254U, 256T,256U	B						
284U,286U	C						
284TS,286TS	B						
284T,286T	D						
324S,326S	G				14S	1130 T-10	PX- 140
324T,325U, 326T,326U, 364U,365U	F						
324TS,326TS	E						
364TS,364US, 365TS,365US	E						
404TS,404US, 405TS,405US	E						

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

3316M & 3405M Coupling Guards ASSEMBLY NO. 0A03171A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size		
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge
182T,184T, 213,215	A				12 S	1100 T10	PX- 100
213T,215T, 254T,254U, 256T,256U	B						
284U,286U	C						
284TS,286TS	B						
284T,286T	D						
324S,326S	G				14 S	1130 T-10	PX- 140
324T,324U, 326T,326U, 364U,365U	F						
324TS,326TS, 364TS,364US, 365TS,365US	E						
364T,365T, 404U,405U	H						
404T,405T	J						
404TS,404US, 405TS,405US, 444US,445US	E						
444T,445T	K						
444TS,445TS, 447TS	H						

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

3316L & 3405L Coupling Guards ASSEMBLY NO. 0A03172A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size		
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge
254T,254U, 256T,256U, 284TS,284U, 286TS,286U	A				12 S	1100 T10	PX- 100
284T,286T	B						
324TS,326TS	C						
324S,326S	E						
324U,326U	D						
324T,326T, 364TS,364US, 365TS,365US	C				14 S	1130 T-10	PX- 140
364U,365U	D						
364T,365T	F						
404TS,404US, 405TS,405US, 444US,445US	C						
404T,405T	G						
404U,405U, 444U,445U	F						
444T,445T	H						
444TS,445TS, 445TS	G						

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211



Model 3410

3410 S Coupling Guards ASSEMBLY NO. 0A03157A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size		
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge
143T,145T, 182,182T, 184T,184T, 213,215	A				12 S	1100 T10	PX- 100
213T,215T, 254T,254U, 256T,256U	B						
284U,286U	C						
284TS,286TS	B						
284T,286T	D						
324S,326S	G				14 S	1130 T-10	PX 140
324T,324U, 326T,326U, 364U,365U	F						
324TS,326TS	E						
364TS,365TS, 364US,365US,	E						
364T,365T	H						
404T,405T	J						
404TS,404US, 405TS,405US	E						
444T,445T	K						
444TS,445TS, 447TS	H						

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

3410 M Coupling Guards ASSEMBLY NO. 0A03161A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size		
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge
143T,145T, 182,184, 182T,184T, 213,215	A				12 S	1100 T10	PX- 100
213T,215T, 254T,254U, 256T,256U	B						
284U,286U	C						
284TS,286TS	B						
284T,286T	D						
324S,326S	G				14 S	1130 T-10	PX- 140
324T,324U, 326T,326U, 364U,365U	F						
324TS,326TS	E						
364TS,364US, 365TS,365US	E						
364T,365T	H						
404T,405T	J						
404U,405U	H						
404TS,404US, 405TS,405US, 444US,445US	E						
444T,445T	K						
444TS,445TS, 447TS	H						

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

3410 L Coupling Guards ASSEMBLY NO. 0A03162A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size		
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge
254T,254U, 256T,256U, 284TS,284U, 286TS,286U	A				12-S	1100 T-10	PX- 100
284T,286T	B						
324S,326S	E				14S	1130 T-10	PX- 140
324T,326T	C						
324TS,326TS	C						
324U,326U	D						
364T,365T	F						
364TS,364US, 365TS,365US	C						
364U,365U	D						
404T,405T	G						
404TS,404US, 405TS,405US, 444US,445US	C						
404U,405U, 444U,445U	F						
444T,445T	H						
444TS,445TS, 447TS	G						

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

3410 XL Coupling Guards ASSEMBLY NO. 0A03163A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size		
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge
254T,254U, 256T,256U, 284TS,284U, 286TS,286U	A				12-S	1100 T-10	PX- 100
284T	B						
324S,326S	E				14 S	1130 T-10	PX- 140
324T,326T	D						
324TS,326TS	C						
324U,326U	D						
364T,365T	E						
364TS,364US, 365TS,365US	C						
364U,365U	D						
404T,405T	G						
404TS,404US, 405TS,405US	C						
404U,405U	F						
444T,445T	H						
444TS,445TS, 447TS	G						

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211



Model 3415

3415 S Coupling Guards Ball Bearing Construction Only⁽¹⁾

ASSEMBLY NO. 0A03168A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size Falk
		Steel 3201	Alum 9913	316SS 3211	
404T,405T	B				1030 G-20
404TS,405TS	A				
444T,445T	C				
444TS,445TS, 447TS	B				
447T	C				

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

**3415 M Coupling Guards
Ball Bearing Construction Only⁽¹⁾
ASSEMBLY NO. 0A03169A-**

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size Falk
		Steel 3201	Alum 9913	316SS 3211	
404T,405	B				1045 G-20
404TS,405TS	A				
444T,445T	D				
444TS,445TS, 447TS	C				
447T	D				

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211



Model 3700

3700 S&M Coupling Guards ASSEMBLY NO. 0A03164A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size							
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
143,145T, 182T,184T	A				SC10	1070 T31	PS70	263 DBZ-C	225 RSS	2.5B	20 ES-R	50DG
213T,215T, 254T,256T, 284TS,286TS	B											
284T,286T	C											
324T,326T	D				SC12	1100 T31	PS-100	351 DBZ-C	225 RSS	3.5B	40 ES-R	80D0
324TS,326TS	E											
364T,365T, 404T,405T	F											
404TS,405TS	E											
444T,445T	G											
444TS,445TS	F											
447T	G											
447TS	F											

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

3700 L Coupling Guards ASSEMBLY NO. 0A03165A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size							
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
215T,254T, 256T,284TS, 286TS	A				SC14	1130 T31	PS- 140	451 DBZ-C	225 RRS	3.5B	70 ES-R	90D0
284T,286T, 324T,324TS, 326T,326TS	B											
364T,365T, 404T,405T	C											
404TS,405TS	D											
444T,445T	E											
444TS,445TS, 447TS	C											
447T	E											

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

3700 XL Coupling Guards ASSEMBLY NO. 0A03166A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size							
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Thomas	Love- joy	Fast	Rex- nord	Kop- pers
284T, 286T	A				SC14	1130 T31	PS- 140	451 DBZ-C	225 RRS	3.5B	70 ES-R	90D0
284TS, 286TS	B											
324T, 326T	C											
324TS, 326TS	A											
364T, 365T	D											
364TS, 365TS	A											
404T, 405T	D											
404TS, 405TS	C											
444T, 445T	E											
444TS, 445TS	D											
447T	E											
447TS	D											

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211



Model 3755

3755S Coupling Guards ASSEMBLY NO. 0A03154A-

Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size				
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Love- joy	Fast
56,143T, 145T,182, 182T,184, 184T,213, 215	A				12S	1100 T31	PX-100	225 LC	3.5B
213T,215T, 254T,254U, 256T,256U, 284TS,284U, 286TS,286U	B								
284T,286T	C								
324S,326S	B								
324T,324TS, 324U,326T, 326TS,326U	C								

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211

3755M Coupling Guards ASSEMBLY NO. 0A03167A-

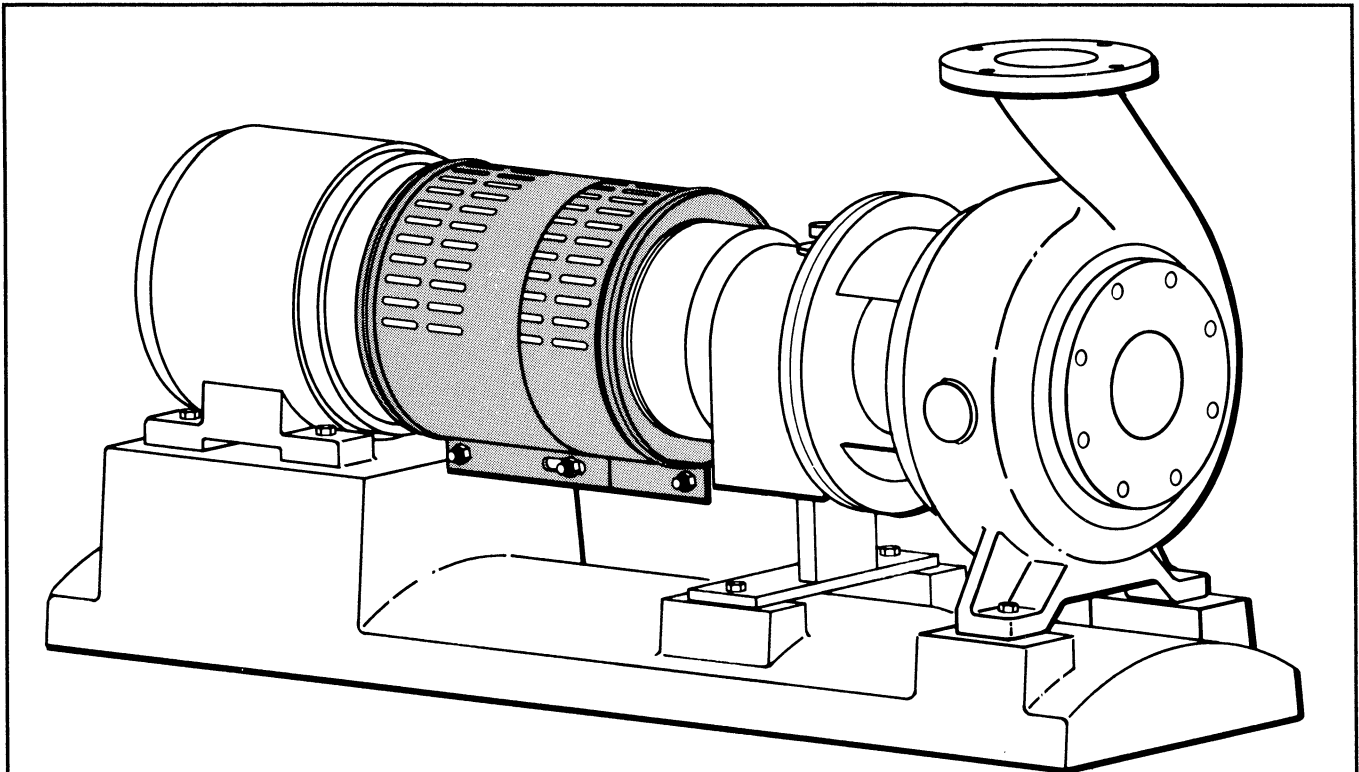
Motor Frames	Suf- fix No.	Guard Mat'l/Code			Maximum Coupling Size				
		Steel 3201	Alum 9913	316SS 3211	Wood's	Falk	Dodge	Love- joy	Fast
143,145T, 182T,184, 184T	A				12S	1100 T-10	PX-100	225 LC	3.5B
213,215,	B								
213T,215T, 254T,254U, 256T,256U, 284TS,284U, 286TS,286U	C								
284T,286T 324S,326S	D								
324S,326S	C								
324T,326T	D								
324U,326U	E								
364T,365T	F								
364TS,364US, 365TS,365US	D								
364U,365U	E								
404T,404U, 405T,405U	F								
404TS,404US, 405TS,405US	D								

Material Code Selection Chart	
Material	Code
Carbon Steel	3201
Aluminum	9913
316 Stainless Steel	3211



GOULDS PUMPS

Installation Instructions for Goulds ANSI B15.1 Coupling Guards

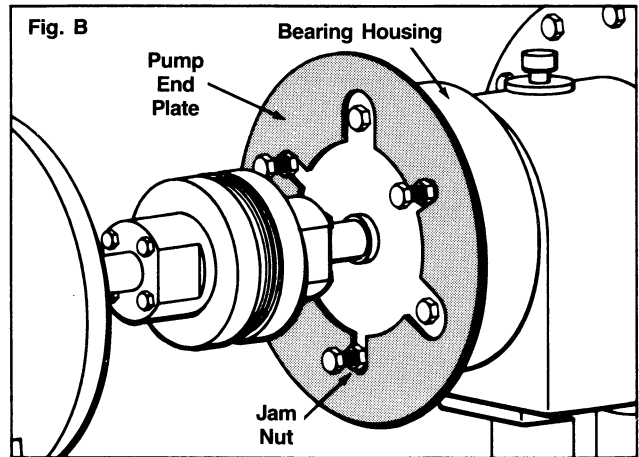
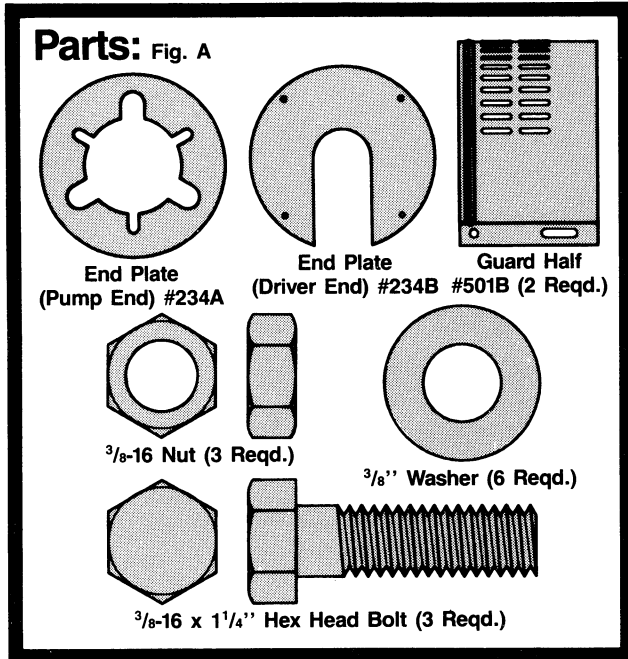


Section I: Instructions for ST, MT, LTC, & XLT Power Ends (Units built prior to October 1990)

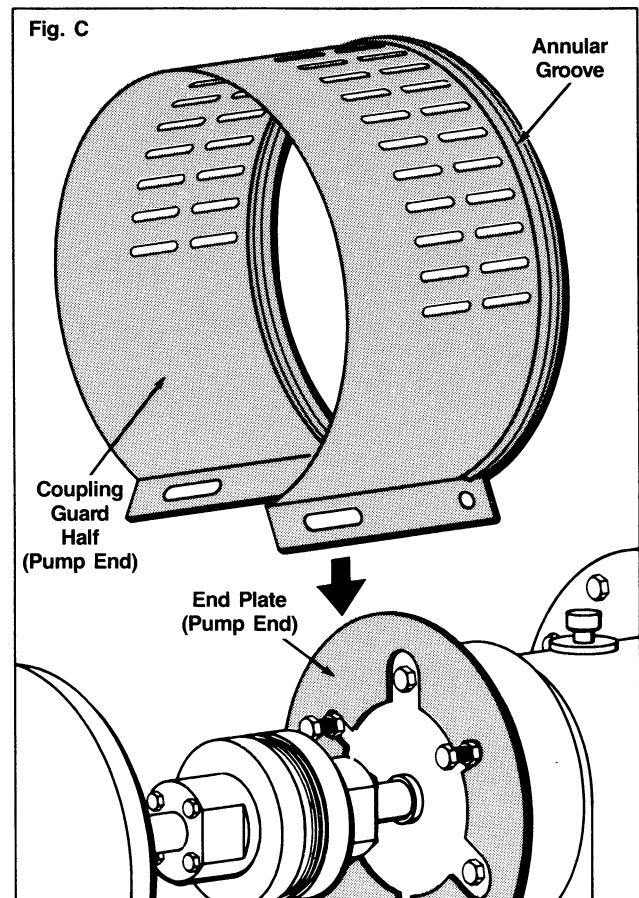
Section II: Instructions for STX, MTX, LTX, XLT-X and X-17 Power Ends

CAUTION: Before assembly or disassembly of the coupling guard is performed the motor must be de-energized, the motor controller/starter put in a locked-out position and a caution tag placed at the starter indicating the disconnect. Replace coupling guard before resuming normal operation of the pump. Goulds Pumps, Inc. assumes no liability for avoiding this practice.

Section I: Instructions for ST, MT, LTC, & XLT Power Ends



2. Spread bottom of coupling guard half (pump end) slightly and place over pump end plate as shown in Figure C. The annular groove in the guard half is located around the end plate. See detail drawing, Figure E.



Simplicity of design allows complete assembly of the coupling guard, including the end plate (pump end), in about fifteen minutes. If the end plate is already in place, assembly can be accomplished in about five minutes.

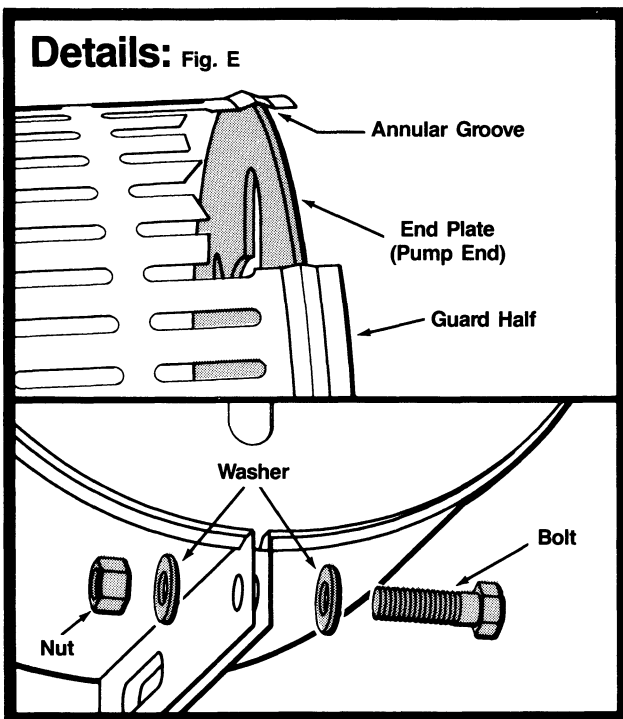
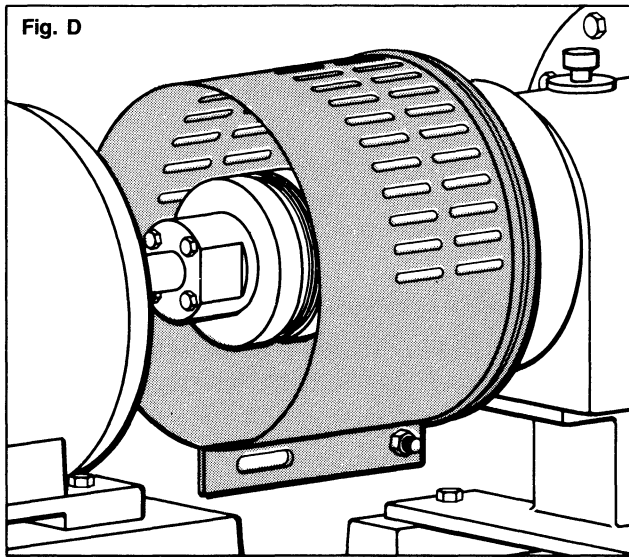
Assembly:

NOTE: If end plate (pump end) is already installed, make any necessary coupling adjustments and then proceed to Step 2.

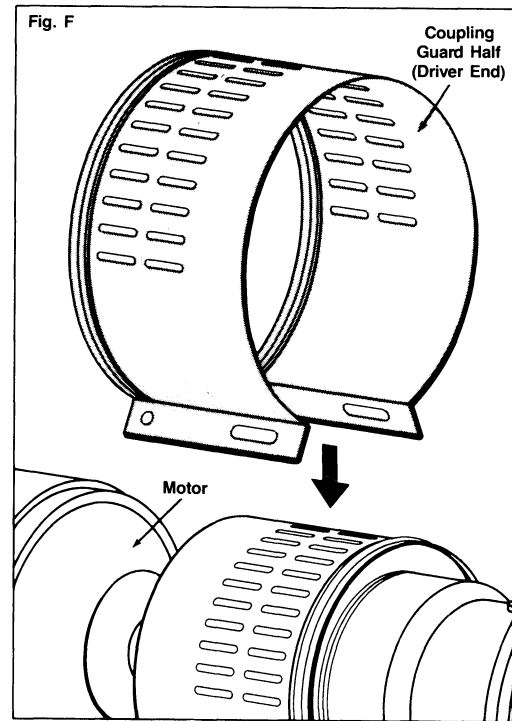
1. Align the end plate (pump end) to the pump bearing housing so that the large slots on the end plate clear the bearing housing tap bolts and the small slots are aligned to the impeller adjusting bolts. Attach the end plate to the bearing housing using the jam nuts on the impeller adjusting bolts as shown in Figure B. After the end plate is attached to the bearing housing, the impeller clearance must be checked and reset as explained in the Goulds operations and maintenance manual for your pump.

NOTE: Coupling adjustments should be completed before proceeding with coupling guard assembly.

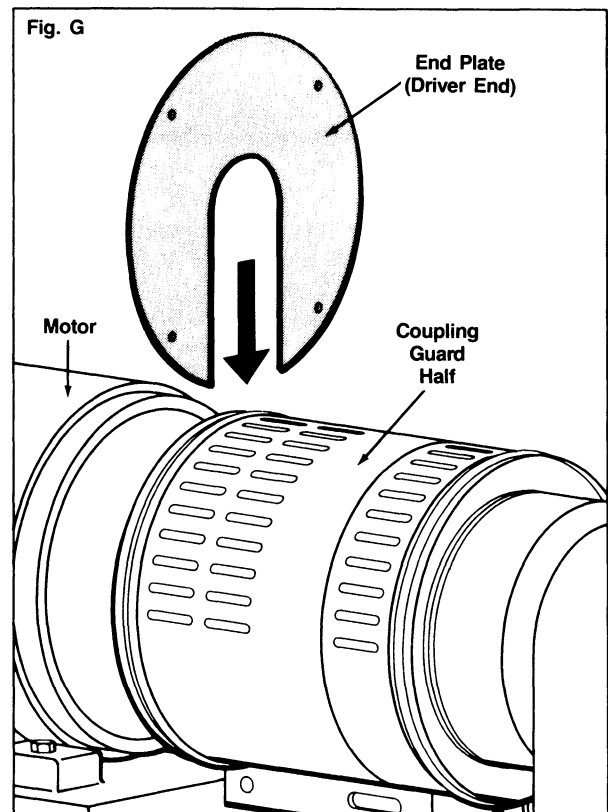
3. After the coupling guard half (pump end) is located around the end plate, secure it with a bolt, nut and two (2) washers through the round hole at the front end of the guard half as shown in Figure D. Tighten securely. See detail drawing, Figure E.



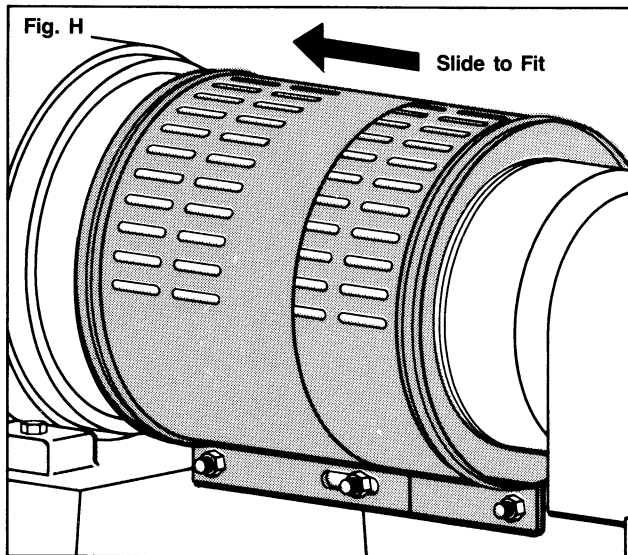
4. Spread bottom of coupling guard half (driver end) slightly and place over coupling guard half (pump end) so that annular groove in coupling guard half (driver end) faces the motor as shown in Figure F.



5. Place end plate (driver end) over motor shaft as shown in Figure G. Locate the end plate in the annular groove at the rear of the coupling guard half (driver end) and secure with a bolt, nut, and two (2) washers through the round hole at the rear of the guard half. Finger tighten only.



6. Adjust length of coupling guard to completely cover shafts and coupling as shown in Figure H by sliding coupling guard half (driver end) towards motor. After adjusting guard length, secure with bolt, nut and two (2) washers through the slotted holes at the center of the guard and tighten. Check all nuts on the guard assembly for tightness.



Disassembly

The coupling guard must be removed for certain maintenance and adjustments to the pump, such as adjustment of the coupling, impeller clearance adjustment, etc. The coupling guard should be replaced after maintenance is completed.

DO NOT resume normal pump operation with the coupling guard removed.

NOTE: Refer to illustrations for assembly in reverse order.

1. Remove nut, bolt, and washers from center slotted hole in the coupling guard. Slide motor end coupling guard half towards pump. Figure H.
2. Remove nut, bolt, and washers from coupling guard half (driver end), and remove end plate. Figure G.
3. Spread bottom of coupling guard half slightly and lift off. Figure F.
4. Remove remaining nut, bolt, and washers from coupling guard half (pump end). Spread bottom of coupling guard half slightly and lift off. Figure C.

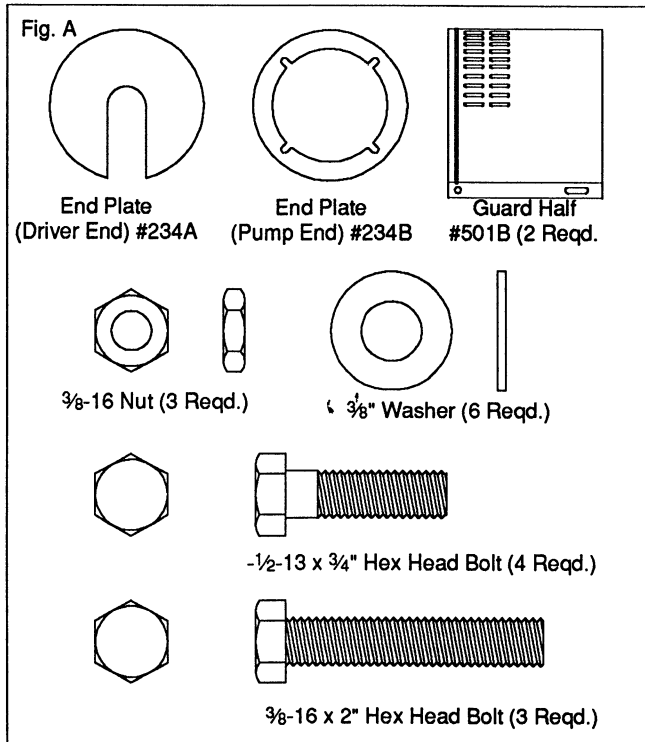
This completes disassembly of the coupling guard.

NOTE: It is not necessary to remove the end plate (pump end) from the pump bearing housing. The bearing housing tap bolts are accessible without removing the end plate in case maintenance of internal pump parts is necessary. Before removing the pump bearing housing, refer to the Goulds operations and maintenance manual for your particular pump.

Section II: Instructions for STX, MTX, LTX, XLT-X and X-17 Power Ends.

WARNING

Before assembly or disassembly of the coupling guard is performed the motor must be de-energized, the motor controller/starter put in a locked-out position and a caution tag placed at the starter indicating the disconnect. Replace coupling guard before resuming normal operation of the pump. Goulds Pumps, Inc. assumes no liability for avoiding this practice.



Simplicity of design allows complete assembly of the coupling guard, including the end plate (pump end), in about fifteen minutes. If the end plate is already in place, assembly can be accomplished in about five minutes.

Assembly:

NOTE: If end plate (pump end) is already installed, make any necessary coupling adjustments and then proceed to Step 2.

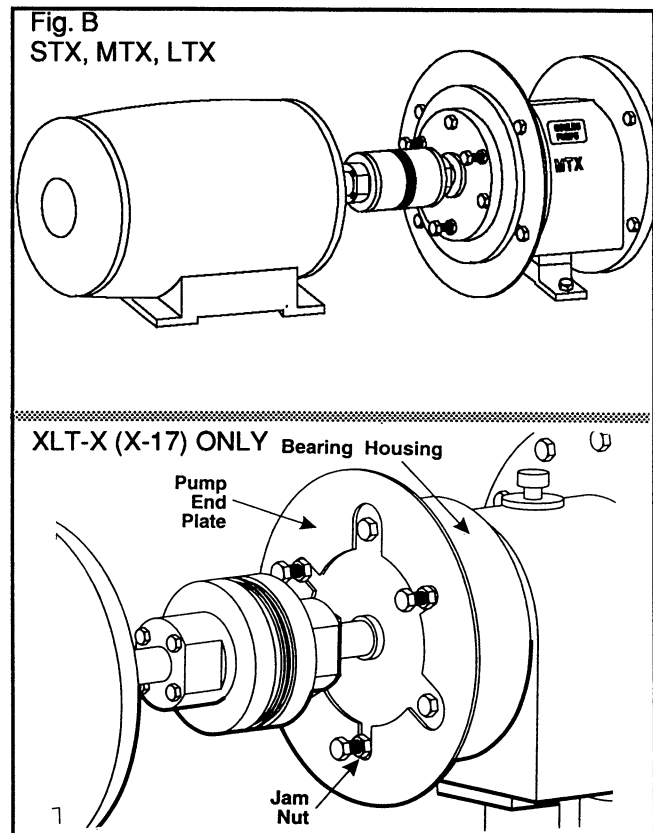
1. **XLT-X (X-17) ONLY** - Align the end plate (pump end) to the pump bearing housing so that the large slots on the end plate clear the bearing housing tap bolts and the small slots are aligned to the impeller adjusting bolts. Attach the end plate to the bearing housing using the jam nuts on the impeller adjusting bolts as shown in Figure

B.

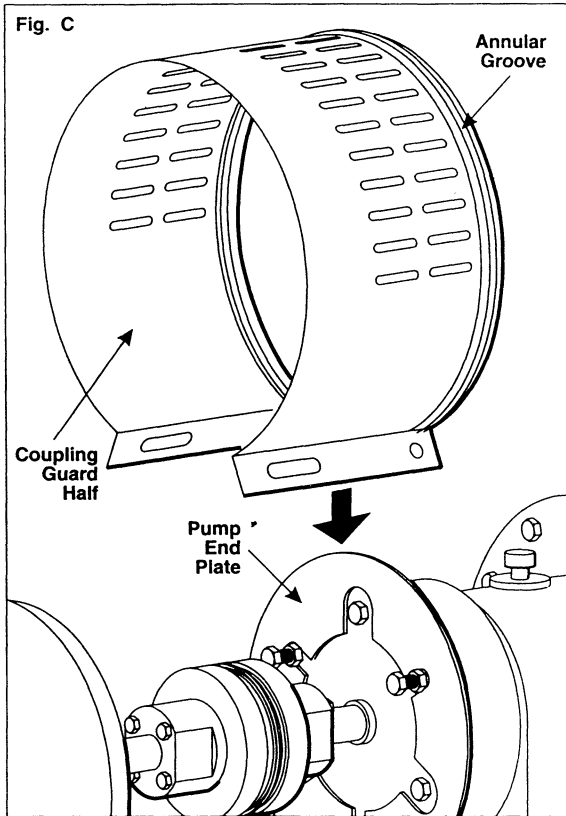
After the end plate is attached to the bearing housing the impeller clearance must be checked and reset as explained in the Goulds operations and maintenance manual for your pump.

STX, MTX, LTX - Align end plate (pump end) to the Bearing Frame. (No impeller adjustment required)

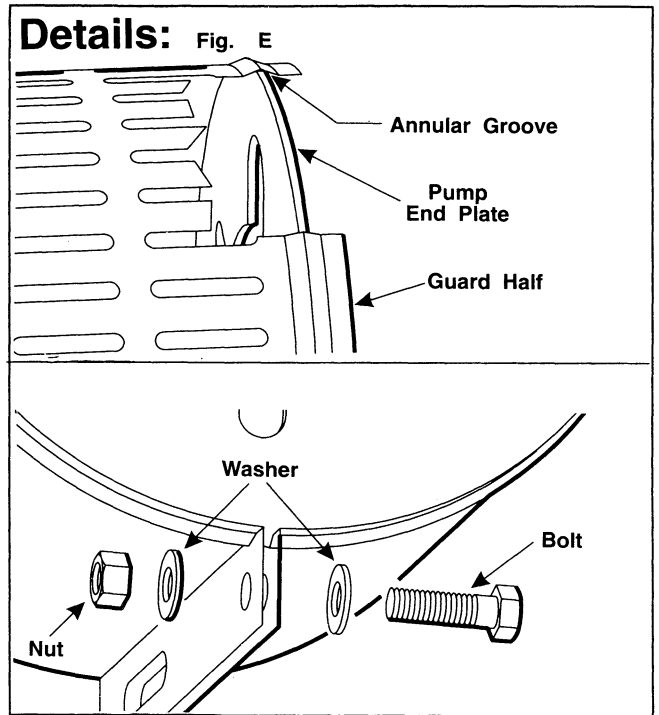
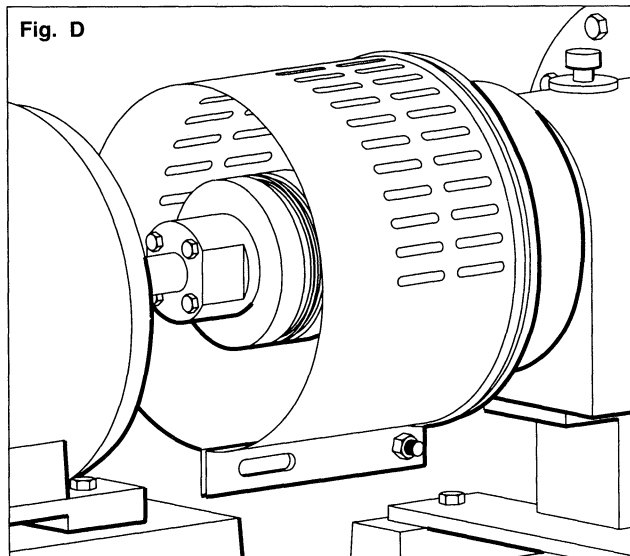
NOTE: Coupling adjustments should be completed before proceeding with coupling guard assembly.



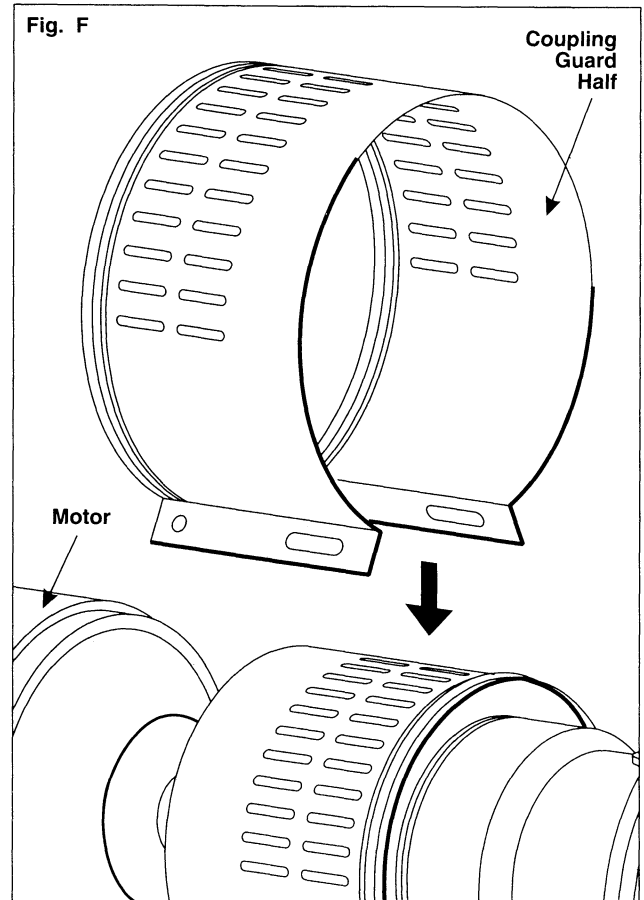
- Spread bottom of coupling guard half (pump end) slightly and place over pump end plate as shown in Figure C. The annular groove in the guard half is located around the end plate. See detail drawing, Figure E.



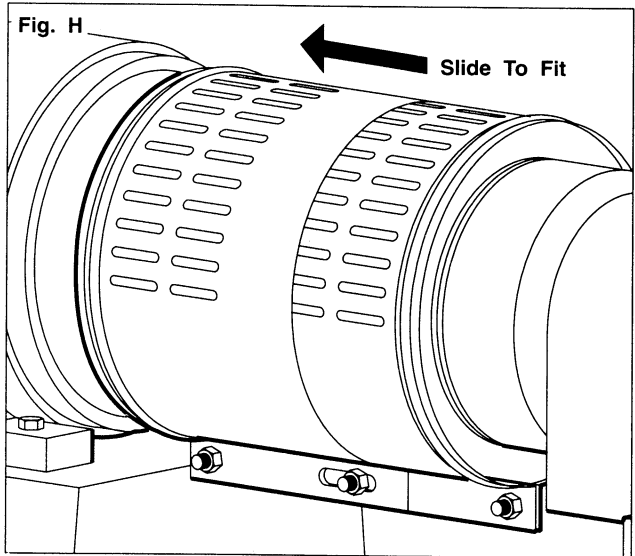
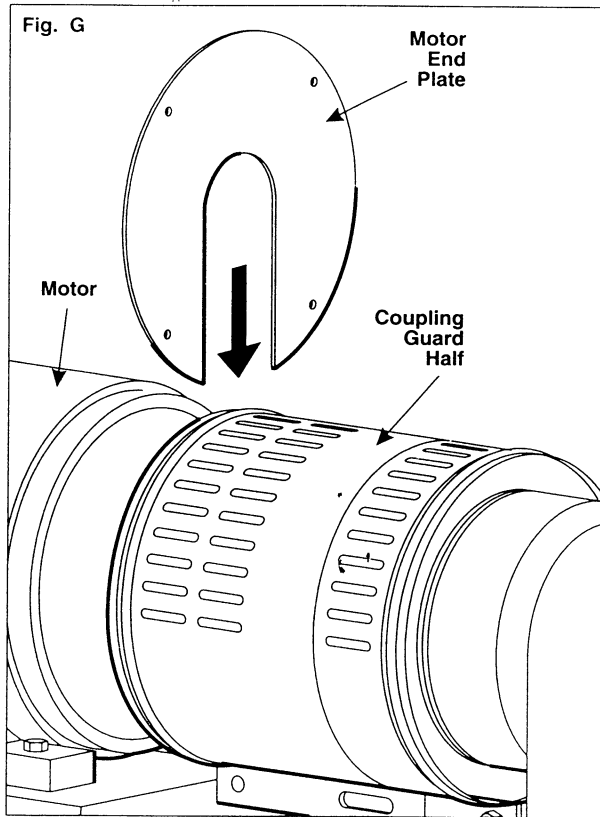
- After the coupling guard half (pump end) is located around the end plate, secure it with a bolt, nut and two (2) washers through the round hole at the front end of the guard half as shown in Figure D. Tighten securely. See detail drawing, Figure E.



- Spread bottom of coupling guard half (driver end) slightly and place over coupling guard half (pump end) so that annular groove in coupling guard half (driver end) faces the motor as shown in Figure F.



5. Place end plate (driver end) over motor shaft as shown in Figure G. Locate the end plate in the annular groove at the rear of the coupling guard half (driver end) and secure with a bolt, nut, and two (2) washers through the round hole at the rear of the guard half. Finger tighten only.



6. Adjust length of coupling guard to completely cover shafts and coupling as shown in Figure H by sliding coupling guard half (driver end) towards motor. After adjusting guard length, secure with bolt, nut and two (2) washers through the slotted holes at the center of the guard and tighten. Check all nuts on the guard assembly for tightness.

WARNING

Before assembly or disassembly of the coupling guard is performed the motor must be de-energized, the motor controller/starter put in a locked-out position and a caution tag placed at the starter indicating the disconnect.

Replace coupling guard before resuming normal operation if the pump. Goulds Pumps, Inc. assumes no liability for avoiding this practice.

Disassembly

The coupling guard must be removed for certain maintenance and adjustments to the pump, such as adjustment of the coupling, impeller clearance adjustment, etc. The coupling guard should be replaced after maintenance is completed.

DO NOT resume normal pump operation with the coupling guard removed.

NOTE: Refer to illustrations for assembly in reverse order.

1. Remove nut, bolt, and washers from center slotted hole in the coupling guard. Slide motor end coupling guard half towards pump. Figure H.
2. Remove nut, bolt, and washers from coupling guard half (driver end), and remove end plate. Figure G.
3. Spread bottom of coupling guard half slightly and lift off. Figure F.
4. Remove remaining nut, bolt, and washers from coupling guard half (pump end). Spread bottom of coupling guard half slightly and lift off. Figure C.

This completes disassembly of the coupling guard.

NOTE: It is not necessary to remove the end plate (pump end) from the pump bearing housing. The bearing housing tap bolts are accessible without removing the end plate in case maintenance of internal pump parts is necessary. Before removing the pump bearing housing, refer to the Goulds operations and maintenance manual for your particular pump.

