

# THE PIERCE COMPANY, INC.

## UPLAND, INDIANA, USA

### INSTALLATION INSTRUCTIONS

#### PIERCE GOVERNOR FOR GRAVELY TRACTOR INSTALLATION

##### GENERAL INFORMATION

The Governor functions to adjust the flow of fuel through the carburetor automatically as the work load changes. It does this by action of the governor weights and spring: as the engine RPM **decreases**, due to added work load, the Governor Spring moves the Carburetor Bellcrank toward Open Throttle, allowing more fuel to reach the engine. Conversely, when the engine RPM **increases** due to a lighter work load, the Governor Weights (inside) move the Carburetor Bellcrank toward Closed Throttle to decrease the flow of fuel.

The Pierce Governor, as with all governors, is designed to operate within a certain range of engine RPM. The Gravelly Tractor develops maximum horsepower under load at about 2600 RPM. It is the function of the Governor to feed the fuel automatically so the engine RPM will remain at the level that develops maximum horsepower.

However, once the engine is loaded above a certain point, the Carburetor is "Wide Open." This means it is feeding all the fuel possible to the engine. Thus, it is entirely possible to stall the Tractor, even when Governor-equipped, simply because the limit of engine capacity has been reached. This is not any fault of the Governor.

Faulty installation and adjustment of the governor will allow the engine to operate at excessive RPM, or not allow the engine to idle, etc. Therefore, it is most important that these instructions be followed carefully and thoroughly.

##### LUBRICATION INSTRUCTIONS

The Governor is lubricated at the factory. Additional lubrication is not required until 1,000 hours of Engine Operation or a period of time not to exceed two years. Service the Governor with 10W30 motor oil and check the oil level daily.

##### INSTALLATION INSTRUCTIONS

1. Install Governor on Governor mounting bracket. (Figure 1)
2. Install Governor with Governor mounting bracket to Tractor. (Figure 1)
3. Check alignment of Belt and Governor Pulley. Bend Bracket until Governor Pulley is straight and square with Fan Belt.

Adjust Bracket to make Governor Pulley bear firmly on Fan Belt. Avoid excessive Belt pressure.

5. Assemble the Governor Control Bracket and Arm (1 & 2 in Figure 2) The Governor Control Arm should move easily with very light pressure.
6. Insert the Governor Control Link (3 in Figure 2) into the hole in the Governor Control Arm, extending it toward the Governor Lever.
7. Mount Bellcrank (4 in Figure 2) to carburetor, discarding the old Bellcrank. Mount so there is approximately equal travel between a vertical line and wide "Open" throttle and a vertical line and

“Closed” throttle. (Figure 3) Then just barely “crack” the Bellcrank away from the wide open stop with a .020” feeler gauge.

Slide the Linkage Rod (5 in Figure 2) thru the hole in the Swivel Clamp on the Governor Throttle Lever. Then attach the other end to the Carburetor Bellcrank with the small Clip provided. (Figure 2) **The Throttle Linkage Rod may be bent slightly; the Rod must fit freely and firmly in place without binding or strain.** Apply spring tension to Governor Throttle Lever. (This forces the Governor throttle lever to its Wide Open Throttle position.) With the Carburetor Lever .020” off the Wide Open Stop (Figure 3), carefully tighten the screw in the Swivel Clamp. Release spring tension and manually check for binding or lost motion in the linkage.

9. Insert the Governor Spring (6 in Figure 2) into the center hole in the Governor Lever. Hook Spring into the slot in the Governor Control Link.

10. On models using Cable Control, assemble Cable Mounting Bracket (7 in

Figure 4) and attach Control Cable. Bend the Throttle Wire 5/8” from the end in a downward position so the end is vertical to the ground. Insert into hole in the Governor Arm, and then bend into a horizontal position to the ground. Test to make sure Throttle Wire can move freely through its entire travel without binding the Throttle Wire portion that is within the Governor arm. Adjust as required.

11. Start the Tractor. With Throttle Lever closed, adjust the Carburetor Idling Screw until the Tractor is idling Satisfactorily, being sure the Idle Screw contacts the stop while this is being done.

The purpose of the holes in the Governor Lever is to control the sensitivity of response by the Governor to the engine load changes. If the Governor is not responding quickly enough to load, move the Spring one hole closer to the Governor. If it is responding too quickly, move the spring one hole away, continuing until it responds satisfactorily.

Figure 1

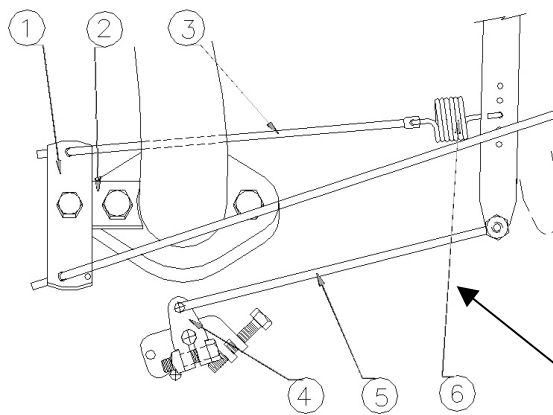
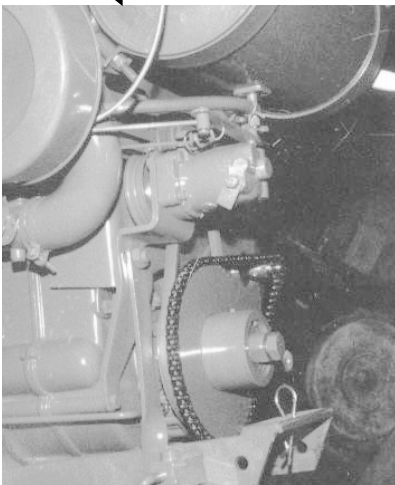


Figure 3

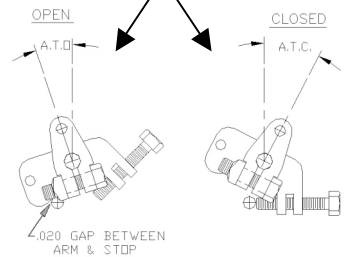
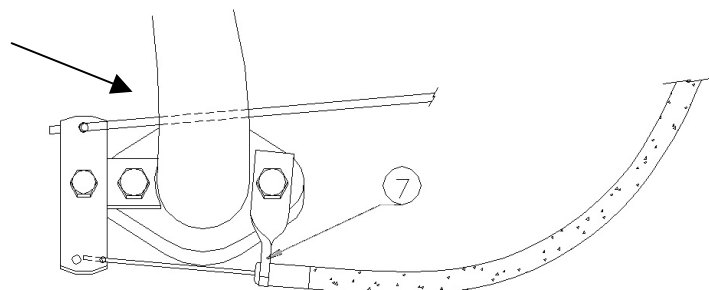
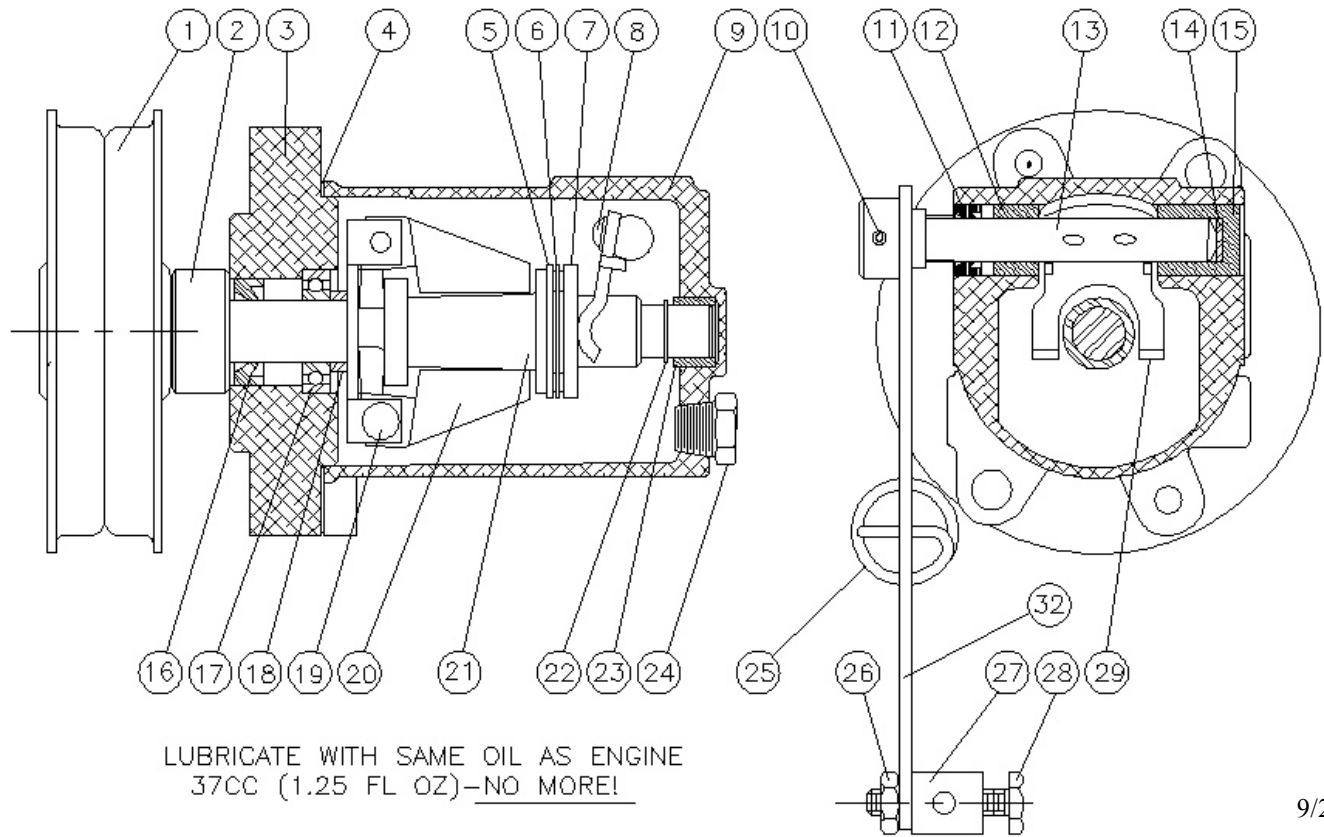


Figure 2

Figure



# Gravelly Tractor Governor Parts



1.	A6181	PULLEY	1-REQ'D	17.	X1329	BALL BEARING	1-REQ'D
2.	G11898	SPACER	1-REQ'D	18.	G8299	SPACER	1-REQ'D
3.	G912116	GOVERNOR FLANGE	1-REQ'D	19.	G14013	WEIGHT PIN	4-REQ'D
4.	X2284	GASKET	1-REQ'D	20.	G86901	WEIGHT	4-REQ'D
5.	G13416	THRUST WASHER- <i>THIN</i>	1-REQ'D	21.	G10530	THRUST SLEEVE	1-REQ'D
6.	X3228	THRUST BEARING	1-REQ'D	22.	X4223	EXT. RETAINING RING	1-REQ'D
7.	G13417	THRUST WASHER- <i>THICK</i>	1-REQ'D	23.	G3168	BUSHING	1-REQ'D
8.	X1789	ROUND-HD SCREW #6-32	2-REQ'D	24.	01400010	PIPE PLUG 1/8" NPTF	1-REQ'D
9.	G912129	GOVERNOR BODY	1-REQ'D	25.	SN5	GOVERNOR SPRING	1-REQ'D
10.	X2607	ROLL PIN	1-REQ'D	26.	X4013	SELF-LOCK HX-NUT #12-24	1-REQ'D
11.	X3708	OIL SEAL 1/2" O.D.	1-REQ'D	27.	G21606	SWIVEL PIN	1-REQ'D
12.	X2710	BUSHING	1-REQ'D	28.	X4104	HX-HEAD SCREW #12-24	1-REQ'D
13.	G14412	ROCKER SHAFT	1-REQ'D	29.	G9839	YOKE	1-REQ'D
14.	G12250	THRUST DISC	1-REQ'D	30.	X1619	1/4-20 SCREW-NOT SHOWN	2-REQ'D
15.	X2711	BUSHING-CLOSED END	1-REQ'D	31.	X432	1/4" L' WASHER-NOT SHOWN	2-REQ'D
16.	X695	OIL SEAL 3/4" O.D.	1-REQ'D	32.	A7576	THROTTLE LEVER ASSEM.	1-REQ'D



# THE PIERCE COMPANY, INC.

A SUBSIDIARY OF AVIS INDUSTRIAL CORPORATION

## ORDER BLANK

Date: \_\_\_\_\_

Purchase Order #: \_\_\_\_\_

<u>CUSTOMER NAME &amp; ADDRESS:</u>	<u>SHIP TO ADDRESS:</u>
_____	_____
_____	_____
_____	_____

<u>QUANTITY ORDERED</u>	<u>DESCRIPTION</u>
<input type="text"/>	<b><u>MA2028R1</u></b> GOVERNOR KITS FOR GRAVELY TRACTOR INSTALLATION 3 1/2 \$216.88 + Ship Chg _____
<input type="text"/>	<b><u>GC4405R1</u></b> REPLACEMENT GOVERNORS FOR GRAVELY TRACTOR INSTALLATION 1 1/2 \$164.40 + Ship Chg _____

FOB: Upland, Indiana 46989

Delivery: Same Day Shipment if order placed before 2 P.M.

Terms: COD - HOLD FOR CHECK



# THE PIERCE COMPANY, INC.

A SUBSIDIARY OF AVIS INDUSTRIAL CORPORATION

## ORDER BLANK

**The Pierce Company is able to ship via UPS as follows:**

**\*\* Customer has an account with The Pierce Company**

The Pierce Company will prepay UPS charges – Adding all charges to your invoice (or) The customer will provide UPS Acct #, all UPS Shipping charges will be applied accordingly

**\*\* Customer does not have an account with The Pierce Company**

\*\* COD - See description below

\*\* Hold For Check - See description below

**COD** – A return call will be made to you providing the total amount due (product + shipping charges) Allowing you the opportunity to complete your check before the UPS driver arrives at your facility. Please make the check payable to The Pierce Company for the total amount due.

**Hold For Check** – A return call will be made to you providing the total amount due (product + shipping charges) Please make the check payable to The Pierce Company for the total amount due, and forward to our facility. Your order will be released for shipment as soon as we have received your payment in full.



# THE PIERCE COMPANY, INC.

A SUBSIDIARY OF AVIS INDUSTRIAL CORPORATION

## ORDER BLANK SPARE PARTS LIST

PART NUMBER	DESCRIPTION	NET PRICE	EXTENSION
G902129	BODY	18.33	
G912116	FLANGE	13.75	
A6181	PULLEY COMPLETE	15.07	
A6835	PULLEY SHAFT & SPIDER ASSY.	17.66	
A7576	THROTTLE LEVER ASSY. ONLY	9.18	
AC575	CARBURETOR BELLCRANK ASSEMBLY	4.81	
C858	THROTTLE ROD CLIP (LEFT HAND)	1.15	
C877	THROTTLE ROD CLIP (RIGHT HAND)	2.02	
G3168	PULLEY & SPIDER SHAFT OILITE BUSHING	10.66	
G8299	SPACING COLLAR BETWEEN SPIDER & BRG. ON PULLEY SHAFT	6.82	
G86901	WEIGHTS	23.42	
G9839	YOKE	11.35	
G10530	THRUST SLEEVE	7.82	
G11898	PULLEY SPACING WASHER	7.31	
G11933	GOVERNOR CONTROL LINK	25.36	
G11942	THROTTLE ROD	1.26	
G12250	THROTTLE SHAFT THRUST DISC	1.20	
G13505	ENGINE TO GOVERNOR MTG. BRACKET	8.82	
G13506	GOVERNOR CONTROL BRACKET	1.13	
G13507	GOVERNOR CONTROL ARM	18.40	
G13416	THRUST WASHER (.031)	2.04	
G13417	THRUST WASHER (.093)	4.60	
G14013	WEIGHT HINGE PIN	1.58	
G14412	THROTTLE LEVER SHAFT	13.17	
G21606	THROTTLE LEVER SWIVEL PIN	9.95	
SN5	GOVERNOR SPRING	4.50	
X2151	HEX-NUT 1/4-20	.55	
01170139	LOCKWASHER 1/4	1.28	
X695	PULLEY SHAFT OIL SEAL	3.08	
X1329	BEARING	8.59	
35282	SCREW 1/4-20 X 1.25 CAP	.80	
X3228	THRUST SLEEVE BEARING	4.09	
X1619	GOVERNOR MTG. SCREW 1/4-28X3/4 (INCLUDING LOCKWASHERS)	.50	

P. O. BOX 2000 UPLAND, INDIANA 46989  
PHONE NO. 765-998-2712 FAX NO. 765-998-3348



# THE PIERCE COMPANY, INC.

A SUBSIDIARY OF AVIS INDUSTRIAL CORPORATION

## ORDER BLANK

PART NUMBER	DESCRIPTION	NET PRICE	EXTENSION
X1659	FILLER PLUG	1.12	
X1789	YOKE SCREWS (INCLUDING LOCKWASHERS)	.45	
X2284	BODY FLANGE GASKET	1.11	
X2607	THROTTLE LEVER TO SHAFT PIN	.84	
X2710	PLAIN THROTTLE SHAFT BUSHING	5.06	
X2711	CLOSED END THROTTLE SHAFT BUSHING	4.58	
X3708	THROTTLE SHAFT OIL SEAL	5.52	
X4007	SELF-LOCKING NUT	4.12	
X4013	SELF-LOCKING NUT #12-24	.55	
X4104	HEX HEAD MACHINE SCREW	1.10	
3522	SCREW 1/2-20 X 1/2	.84	
X4223	PULLEY SHAFT RETAINING RING	2.09	
X431	LOCK WASHER	1.28	
<b>TOTAL AMOUNT OF ORDER</b>			<input type="text"/>

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