

## Product Decomposition

**Design Organization:** Example for The Mechanical Design Process

**Date:** Aug 14 2007





**Product Decomposed::** Irwin Quick Grip – pre 2007








**Description** This is the Quick-Grip Product that has been on the market for many years








**How it works:** Squeeze the pistol grip repeatedly to move the jaws closer together and increase the clamping force. Squeeze the release trigger to release the clamping force. The foot (the part on the left in the picture that holds the face that is clamped against) is reversible so the clamping force can be made to push apart rather than squeeze together.


**Parts:**







Part #	Part Name	# Req'd	Material	Mfg Process	Image
1	Main body	1	PPO or PVC	Injection molded	
2	Trigger	1	PVC	Injection molded	
3	Bar	1	Steel	Cold rolled	
4	Face plate, left	1	polyethylene	Injection molded	


5	Face Plate, right (burned as part of ID process)	1	polyethylene	Injection molded	
6	Tail stock	1	PVC	Injection molded	
7	Lock	1		Injection molded	
8	Pad	2		Injection molded	
9	Roll pin	1	Steel	Rolled Sheet	
10	Knurled pin	1	Steel	Cold rolled	
11	Release trigger spring	2	Steel	Wound wire	

12	Release trigger	1	Steel	Stamped sheet	
13	Power spring	1	Steel	Wound wire	
14	Jam plates	2	Steel	Stamped Sheet	
15	Label	1	PVF	Cut sheet	
16	Split pins	2	Steel	Rolled sheet	

**Disassembly:**

Step #	Procedure	Part #s removed	Image
1	Take off Left Face Plate	4	

2	Take off right Face Plate and label	5, 15	
3	Remove Tail Stock assembly	6,7,8,9,10	
4	Remove one of the split pins	16	
5	Remove Main Body assembly	1,2,8,11,12,13,14	
6	Press out Roll Pin from Tail Stock assembly	9	
7	Press out Knurled Pin from Tail Stock assembly	10	
8	Pry off Lock from Tail Stock assembly	7	
9	Pry off Pad from Tail Stock assembly	8	
10	Remove Release Trigger from Main Body Assembly	12	
11	Remove Trigger Springs from Main Body Assembly	11	

12	Remove Jam Plates and Power Spring from Main Body Assembly	13,14	
13	Remove Trigger from Main Body Assembly	2	
14	Pry off Pad from Main Body assembly	8	

**Links and drawing files:**

Team member:	Prepared by:David Ullman
Team member:	Checked by:
Team member:	Approved by:
Team member:	